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ABSTRACT

This study utilized three procedures to evaluate the curriculum phase of the Teacher Education and Media (TEAM) Project of the American Association of Colleges for Teacher Education (AACTE). A questionnaire was sent to the chief institutional representatives at 810 AACTE member colleges and universities, and external and internal evaluation criteria were applied to the project. Questionnaire respondents indicated that they consider the TEAM Project program an improvement over existing programs and are using certain parts of it. External and internal criteria disclosed several weaknesses such as the lack of a sound philosophy of the nature of teaching, poor selection of source materials, and inadequate attention given to the type of learning activities to be utilized in presenting the content included in the various topics. Several strengths also appeared. They include the use of an organizing center, the use of teacher behaviors as a basis for the program, and the guideline that the natural dynamics of the teaching-learning situation should serve as the organizational framework for teacher education programs. (For a complete description of the TEAM Project, see ED 026 294). (RT)

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AN ANALYSIS OF THE CURRICULUM PHASE OF THE TEACHER EDUCATION AND MEDIA PROJECT OF THE AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

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ABSTRACT OF DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate School
of The Ohio State University

by

Nathan James Weate, Jr., B.S., M.A.

* * * * * * *

The Ohio State University
1969

Approved by

Adviser
Department of Education

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AN ANALYSIS OF THE CURRICULUM PHASE OF THE TEACHER EDUCATION AND MEDIA PROJECT OF THE AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

by

Nathan James Weate, Jr., Ph.D.

The Ohio State University, 1969

Professor Robert E. Jewett, Adviser

This study evaluated the curriculum phase of the Teacher Education and Media (TEAM) Project of the American Association of Colleges for Teacher Education (AACTE). The TEAM Project is a proposal for the professional component of a teacher education program. The AACTE is the most influential organization in teacher education in the United States. The pertinence of this study is gained from AACTE backing of the TEAM Project.

One part of the procedures was to survey the Chief Institutional Representatives at 810 colleges and universities in the AACTE. The survey questionnaire asked each representative about: his acquaintance with the TEAM Project program; the value, utilization, and influence of

the rationale, organization, content, and multimedia commitment of the program; the advantages and disadvantages; the value and use of each topic; needed topics; pertinent texts and audiovisual materials; and, reactions to the curriculum program. The responses to the various items were tallied. The significant comments made by the respondents were cited and evaluated.

A second part of the procedures involved the formulation of questions which would judge a teacher education program and the application of these questions to the TEAM Project.

The third part of the procedures involved the application of requirements created by the TEAM Project staff to their own program.

The respondents gave a favorable evaluation to the TEAM Project program in general. More specifically, they indicated that they:

1. consider it of high value;
2. view it as an improvement over existing programs;
3. have been influenced by it;
4. are utilizing certain portions of it;
5. are satisfied with the rationale;
6. have not been influenced by or utilizing its organization of course work;

7. utilize only parts of its content;
8. are implementing a multimedia approach to education.

The topics which received high ratings were those concerned with classroom communication, psychological foundations, lesson planning, practice situations, and objectives. The topics which tended to receive low ratings were those concerned with theories of knowledge, theory construction, and environmental factors. One disadvantage of the TEAM Project is the lack of developed materials for undergraduate usage.

The significant comments indicated faculty introspection into teacher education programs has occurred, resulting in changed content, especially. This is partially due to the TEAM Project.

External and internal criteria disclosed several weaknesses. One was the lack of a sound philosophy of the natures of man and of teaching. An explicit purpose for teacher education was not created. Decision-making ability is not adequately promoted. Theory and practice are not sufficiently integrated. Non-essential knowledge was not excluded sufficiently well. Source materials were poorly selected. There are some areas of content which are needed but are not included in the TEAM Project program. Inadequate attention is given to the type of learning activities to be utilized in presenting the content included in the various topics. Multimedia is no more applicable to the TEAM Project topics than it is to the traditional topics of teacher education programs. Organization was not according to the natural dynamics of the teaching-learning situation.

Several strengths also appeared as salient features of the TEAM Project program. The first is the use of an organizing center. A second strength is that the TEAM Project curriculum was based upon teacher behaviors. The third strength is the guideline that the natural dynamics of the teaching-learning situation rather than research fields of specialization should serve as the organizational framework for teacher education programs.

AN ANALYSIS OF THE CURRICULUM PHASE OF THE TEACHER EDUCATION AND MEDIA PROJECT OF THE AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
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* * * * * * * *

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1969

Approved by

Adviser
Department of Education

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VITA

May 21, 1934	Born - Columbus, Ohio
1958	B.S., The Ohio State University, Columbus, Ohio
1958-1964. .	Public School Teacher, Columbus Public Schools, Columbus, Ohio
1963	M.A., The Ohio State University, Columbus, Ohio
1966-1969. .	Assistant Professor of Education, Graceland College, Lamoni, Iowa

FIELDS OF STUDY

Major Field: Education

Studies in Social Studies Education. Professor Robert E. Jewett

Studies in History of Education. Professor Robert B. Sutton

Studies in Curriculum and Supervision. Professor Paul R. Klohr

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

VITA iii

LIST OF TABLES vi

LIST OF FIGURES vii

Chapter

I. INTRODUCTION 1

- Significance of the Study
- Statement of the Problem
- Assumptions and Limitations
- Scope of the Investigation
- Definition of Important Terms
- Organization of the Remainder of the Dissertation

II. REVIEW OF RELATED LITERATURE 26

- Institutional Change
- Description of the TEAM Project Program
- Description of the Content of the TEAM Project Program
- Studies Related to the Usage of the TEAM Project Content

III. PROCEDURES 123

- Questionnaire
- Statistical Measures
- Selection of the Population
- Analysis

IV. RESULTS OF THE SURVEY 156

- Iowa Pilot Study
- Statistical Findings from the Questionnaire
- Presentation and Evaluation of Significant Comments from the Questionnaire

Chapter Page

V. ANALYTIC EVALUATION 226

External Criteria
Internal Criteria
Summary

VI. SUMMARY AND CONCLUSIONS 298

Restatement of the Problem
Summary of the Procedures
Summary of the Findings
Conclusions
Recommendations for Further Research

APPENDIXES 316

A. Pilot Study Questionnaire
B. Revised Questionnaire
C. Cover Letter for Questionnaire
D. Table 10.--A Summary of Questionnaire Responses
E. Table 11.--Questions #1 and #2 Response Combinations by Location, Size, and Type of Institution

BIBLIOGRAPHY 338

LIST OF TABLES

Table Page

1. A Summary of Johnson's Findings 120

2. A Summary of Questionnaire Returns and Non-Returns 161

3. Responses to Question #1 164

4. Responses to Question #2 167

5. Comparison of Responses to Questions #1 and #2 169

6. Comparison by Percentage of Response to Question #1 with Response to Question #2 and Completion of Questionnaire 170

7. Cross-Comparison of Questions Pertaining to the Value, Influence, and Utilization of Rationale, Organization, Content, and Multimedia 173

8. Responses to Questions #19 and #20 188

9. Responses, Rank Order, and Differences in Rank Order to Question #21 192

10. A Summary of Questionnaire Responses 330

11. Questions #1 and #2 Response Combinations by Location, Size, and Type of Institution . . 337

LIST OF FIGURES

Figure Page

1. Model for the Dynamics of Teaching 38

2. Simple Instructional System 41

3. The Cognitive Cycle 43

4. Five Geographical Areas 134

5. A Schematic Framework for Selecting Background Knowledge for the Professional Component 149

6. The Dynamics of Curricular Design 292

CHAPTER I

INTRODUCTION

The Teacher Education and Media (TEAM) Project has a very recent origin. In the early part of 1962, planning began for what was to become the TEAM Project of the American Association of Colleges for Teacher Education (AACTE) and the Associated Organizations for Teacher Education (AOTE). A contract was let in February, 1963, by the Educational Media Branch of the U.S. Office of Education to the AACTE and the AOTE for the financial underwriting of the TEAM Project. In May of 1963, the first meeting of the advisory committee and staffs of the project was held. Then, the first comprehensive dissemination of information concerning the project occurred during the summer of 1964 at the biennial AACTE School for Executives held in Oneonta, New York.[1] The materials which were presented at the Oneonta meetings were published in a paperback booklet.[2]

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[1] Herbert F. LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), pp. 70-76.

[2] Herbert F. LaGrone, A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education (hereafter referred to as the Proposal).

This booklet, A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education, represented the first major publication connected with the TEAM Project curriculum phase. The name commonly given to this booklet is the Proposal. Since the time that the Proposal was published, several publications related to the TEAM Project curriculum phase have been printed[3] and a series of nineteen workshops have been held across the country. These workshops demonstrated four portions--interaction analysis, nonverbal behavior analysis, microteaching, and simulation--of the TEAM Project materials.[4]

Mars has provided the most succinct statement of the TEAM Project objectives:

> The first component of TEAM consisted of a new look at the objectives and curriculum of teacher education. The second component was the use of media as a major vehicle for learning.[5]

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[3] American Association of Colleges for Teacher Education, Professional Teacher Education: A Programed Design Developed by the AACTE Teacher Education and Media Project; and John R. Verduin, Jr. (editor), Conceptual Models in Teacher Education (hereafter referred to as Conceptual Models).

[4] American Association of Colleges for Teacher Education, Professional Teacher Education II: A Programed Design Developed by the AACTE Teacher Education and Media Project, A Report on Workshops in Teacher Education, pp. 15-18.

[5] Walter J. Mars, "AACTE Workshop in Teacher Education," Audiovisual Instruction, Vol. XII (Dec., 1967), pp. 1046-1048.

Other, more detailed, statements of objectives are found in a number of writings.[6] For the present purposes, it is sufficient to note that the TEAM Project curriculum phase calls for a new curriculum and new content for teacher education which would be taught through the use of new media based upon a new rationale. The major focus of the present study is upon the curriculum component, with the media component being included only as it impinges directly upon the curriculum phase.

Significance of the Study

The significance of this study is based upon the following several factors:

1. The TEAM Project is backed by the AACTE;
2. The TEAM Project's Proposal by LaGrone and Professional Teacher Education by the AACTE present a distinctively different curriculum for the professional component of teacher education;
3. The content presented in the Proposal and in Professional Teacher Education utilizes current research and theoretical constructs;

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[6] Herbert F. LaGrone and Desmond P. Wedberg, An Introductory Report on a Project to Improve the Professional Sequence in Pre-Service Teacher Education through the Selective and Planned Use of New Media (hereafter referred to as Introductory Report); Richard E. Lawrence, "Foreward" in LaGrone, Proposal, pp. iii and iv; LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), pp. 71-72; and, AACTE, Professional Teacher Education, pp. 1-17.

4. The TEAM Project proposes multimedia instruction;
5. The TEAM Project, like other innovations, faces a problem in diffusion;
6. The TEAM Project needs evaluation and reevaluation.

Each of these factors needs to be considered separately.

The TEAM Project was produced and sponsored by the AACTE. This organization listed 807 colleges and universities from the United States and Puerto Rico as member institutions in 1968.[7] The National Beta Club listed 2831 colleges and universities in the United States and Puerto Rico. Of these, 1613 were senior colleges.[8] As nearly as could be determined, only 1186 of the 1613 were engaged in teacher preparation.[9] Thus, the 807 institutions in the AACTE represented about two-thirds of the institutions involved in teacher preparation. Moreover, the AACTE accounts for the production of more than 90 per cent of the teachers produced annually.[10] The AACTE is the most influential association in regard to effect upon teacher education programs to be found in the United States of America and Puerto Rico. The backing of the AACTE is a strong factor when one considers the potential of the TEAM Project. AACTE backing has undoubtedly contributed to the rapidity with which the curriculum component or content of the TEAM Project has been implemented.

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[7] The American Association of Colleges for Teacher Education, Teacher Education: Issues and Innovations, Twenty-first Yearbook of the Association (1968), pp. 300-364.

[8] The National Beta Club, 1967-68 College Facts Chart.

[9] Iowa State Department of Education, Contact Persons for Teacher Education Programs in Insitutions in the United States and the Territory of Puerto Rico.

[10] AACTE, Teacher Education: Issues and Innovations, Twenty-first Yearbook (1968), p. 197.

The dates for contract approval of the TEAM Project (1963), La Grone and Wedberg's Introductory Report (December, 1963), LaGrone's Proposal (1964), Verduin's Conceptual Models (1967), and AACTE's Professional Teacher Education (1968) need to be considered when one evaluates the rate of adoption of the TEAM Project materials. Project staff members have indicated in a pamphlet that a sizeable number of institutions are using materials, concepts, or technology stemming from the TEAM Project.[11] Excerpts from the survey responses of thirty-one institutions were given in this early-1967 report. Thus, in a little over two years since the first major publication (LaGrone's Proposal), about 4 per cent of the AACTE member institutions reported acceptance of TEAM Project materials.

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[11] AACTE, A Dissemination Report of the Survey of Institutional Activities Related to the Curriculum and Media Aspects of the Teacher Education and Media (TEAM) Project.

LaGrone[12] has categorized the professional component of teacher education programs into five types--"The Traditional Program," "Apprentice-Master Model," "No Professional Preparation," "Bits and Pieces," and "The Team Project Approach." According to these categories, "The Traditional Program" is "the plan that includes courses such as an introduction to or foundations of education, education [sic] psychology, curriculum, methods, and student teaching." The "Apprentice-Master Model" is the internship program made recently popular by James Bryant Conant. There are those who would hold to the "No Professional Preparation," believing that a liberal arts degree in the subject matter to be taught is all that is needed. By "Bits and Pieces" LaGrone refers to those programs which have attempted to revise the traditional program while still retaining the same basic content, organization, or technology. These programs may call for the addition of a fifth year, substituting a seminar for a course, or other innovations. LaGrone recommends the TEAM Project approach on the grounds that it has new content, a new organization, and new technology. While the writer[13] does not recommend that a study be reviewed simply because of novelty, when AACTE backing goes hand-in-hand with a novel program, the program needs to be reviewed carefully in order to establish its worth or worthlessness. Without a doubt, the TEAM Project proposes a distinctively different curriculum for the professional component of teacher education as LaGrone's categories indicate.

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[12] Herbert F. LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the American Association of Colleges for Teacher Education (1965), pp. 219-229.

The content suggested by the TEAM Project is based upon the most current research and theoretical constructs. Hyman[14] makes the distinction between descriptive and evaluative content. Descriptive content is that which is based upon research into the process of teaching; evaluative content is based upon studies of what makes teachers effective or what a good teacher is like. In a similar vein, LaGrone speaks of research based upon "objective analytical techniques rather than . . . the more subjective or impressionistic approaches of prior years."[15] It is the newer, descriptive content that the TEAM Project uses.

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[13] Whenever the person who is conducting this study refers to himself, he will speak of the writer; if he refers to a person who conducted another study, he will speak of the author.

[14] Ronald T. Human (ed.), Teaching: Vantage Points for Study, pp. vii, 1-3.

[15] LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE, p. 225.

A number of the topics contained in the TEAM Project Proposal by LaGrone and Professional Teacher Education by the AACTE require the use of an audio- or videotape recorder, an overhead projector, an 8 mm. projector, or other media singly or in multiple usage. The workshops which were held across the country by the TEAM Project were multimedia presentations.[16] Thus, a definite commitment to and utilization of the current technological innovations exists in the TEAM Project. Multimedia is an inherent part rather than an appendage to the Project.

Because of AACTE backing and the novelty of a different curriculum, different content, a different rationale, and multimedia instruction, the TEAM Project curriculum phase might seem destined to widespread acceptance. Part of the significance of this study is an evaluation of the TEAM Project through public, written criticism (positive and negative). Without a doubt, the most beneficial evaluations will come from empirical studies after implementation of the content and curriculum of the TEAM Project curriculum phase has occurred. Some prejudgment and interim evaluations are necessary, however, in order to guide evaluation, implementation, and revision.

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[16] Mars, "AACTE Workshop in Teacher Education," Audiovisual Instruction, Vol. XII (Dec., 1967), pp. 1046-1048.

The judgments of experts, reports of implementation, and knowledge of available commercial materials are all valuable guides along the way.

This study represents the first large-scale evaluation of the opinions, usage, and results of the TEAM Project curriculum phase by representatives from those institutions which have received the TEAM Project materials; it also represents the first intensive effort to evaluate the TEAM Project curriculum phase by internal and external criteria. Although this study is being completed following the publication of the final report of the curriculum phase of the TEAM Project (Professional Teacher Education), this study provides a useful evaluation, nevertheless. Since the Proposal and Professional Teacher Education present the same curriculum for teacher education, the publication of Professional Teacher Education did not cause the questionnaire used in this study to be out-of-date due to revisions. The result is that the suggestions made in this study are valid.

Statement of the Problem

The purpose of this study was to provide an evaluation of the TEAM Project curriculum phase.

In other words, this study was conducted in order to answer the following questions:

1. Are the representatives of the AACTE member institutions acquainted with the TEAM Project Proposal?
2. Are TEAM Project materials being used at AACTE member institutions?
3. Do representatives of AACTE member institutions consider the TEAM Project rationale, organization, content, and multimedia commitment suitable for use in a program for teacher education?
4. What evaluation is accorded the TEAM Project curriculum phase by external criteria of curriculum excellence?
5. What evaluation is accorded the TEAM Project curriculum phase by internal criteria of curriculum excellence?
6. What ideas for improvement of the TEAM Project program would be in order?

Assumptions and Limitations

One assumption inherent in this study is that the representatives who have answered the questionnaires have identified persistent rather than fleeting opinions and attitudes. A second assumption is that the persons answering the questionnaire represent the official and/or dominant position of the institution with which they are associated.

A rather serious limitation is that favorable opinions and intensive use of ideas does not constitute worth of the materials or ideas. Rather than conclude that the materials are of greater or lesser worth, about all that can be said is that the judgments of experts give them a higher or lower rating. The results of this study are, then, limited to a statement of the judgments of materials and time spent on these materials. A pronouncement of absolute worth cannot be made in this study, if indeed, it can ever be done. It must be remembered that the present study is not an empirical study of the results of teaching new content to teacher education students; instead, it is a survey of the opinions that college teachers have about new content and the evaluation that the writer makes about this content.

Implicit in almost any study related to teacher education is the assumption that teaching can be improved. This study represents no exception to this tendency. The writer does not intend to say that a person is destined to failure or mediocrity without having taken course work in teacher education; the writer does assume that there are courses in teacher education which will significantly improve a person's teaching performance.

Perhaps even more basic to any study of education is the assumption that man does need to be educated.

The lack of large scale research related to the effect of teacher education course work upon teaching ability is a serious limitation. One of the assumptions of the TEAM Project is that traditional programs of teacher education have not produced better teachers.[17] This may be so. The writer, however, does not wish to make any assumptions at this time concerning traditional programs of teacher education or the TEAM Project program in regard to their relative effects. He wishes to point out, in addition to the lack of research, that careful use of the scientific method will indicate whether the traditional approach to teacher education or the TEAM Project approach to teacher education is superior.

The writer was not attempting to obtain data that were highly accurate statistically. Thus, for example, the writer recognizes the limitation of not knowing what percentage of institutions are utilizing the TEAM Project curriculum ideas. The writer does consider it logical to assume that the respondents who completed the questionnaire were more sympathetic to and knowledgeable of the TEAM Project curriculum phase than the non-respondents or those who did not complete the questionnaire. He reasons, therefore, that if this study points out how the TEAM

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[17] Asahel D. Woodruff, "Implications for Institutional Action," Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 232-233; AACTE, Professional Teacher Education, pp. 16-17, 73.

Project curriculum may be improved for the respondents, it will probably be an improvement for the non-respondents, also.

This study was conducted relatively soon after the introduction of the TEAM Project curriculum materials. A limitation arising from this relatively early investigation is that insufficient time was allotted to allow for stabilization of opinions and attitudes. The writer believed that an evaluation was needed early in the development of the TEAM Project curriculum. In fact, since this study was not completed until after the publication of _Professional Teacher Education_, which is the final report of the original government contract, it could be that an evaluation is already quite belated.

Because the TEAM Project curriculum is a composite of a number of ideas, it is difficult to ascertain whether incorporation of content has occurred because of the influence of the TEAM Project. It may be that these ideas would have been adopted just as rapidly without the TEAM Project. Since most of the materials are of quite recent origin, rapid diffusion of them can be individually significant. The writer assumes that being incorporated into a nationally-known program rather than being an isolated study will enhance the chance of adoption. The possibility remains that adoption might have occurred without the TEAM

Project. The only point of concern in this study is whether these studies have been adopted.

Scope of the Investigation

The writer had a definite range of material that he intended to include in this study. This study began by investigating the acquaintance, acceptance, and opinions of representatives of AACTE member institutions about the TEAM Project curriculum component. It also surveyed the use of various parts of the TEAM Project curriculum in teacher education programs at AACTE member institutions. Commercially available reading materials and audiovisual aids that are of value to the implementation of the TEAM Project were identified. Suggestions for improving the TEAM Project were solicited. Going beyond the findings of the questionnaire, the writer injected his own views concerning needed improvements of the TEAM Project and provided his own studied evaluation based upon principles of internal and external criteria.

There are a number of tangential questions about the TEAM Project curriculum phase which the writer did not include in this study. One is that this study does not survey the 382 senior colleges in the United States and Puerto Rico involved in teacher education that were not members of the AACTE.

A second area that this study did not attempt to consider was the comparative effect of the TEAM Project curriculum as opposed to traditional programs upon the performance of teachers. Some AACTE member institutions may have made comparative studies which possibly were reflected in their questionnaire responses. The writer did not intend to report upon such findings, hence did not focus upon this aspect in this study.

This study investigated the attitudes, acceptances, or opinions held by the Chief Institutional Representatives (or someone appointed by the Chief Institutional Representatives) from each member institution of the AACTE. The beliefs and feelings of the majority of the faculties engaged in teacher education were not solicited. It was hoped that some of the more influential faculty members would be contacted in this study and that these individuals would present somewhat of a dominant and official view. The writer was more concerned about the institutional attitudes toward the TEAM Project curriculum component than he was about the attitudes of individual professors.

Of greater import than this dominant and official view was the gaining of an astute evaluation of the TEAM Project curriculum phase so that an on-balance view of it could lead to modification and/or sophistication of the program presented in it.

Some of the tasks of the TEAM Project were entirely related to media. The media component of the TEAM Project included the development of a clearinghouse and a survey of institutional use of media in teacher education programs. This study was not designed to evaluate the media component except as media became an essential part of the curriculum component. The present study focused upon the curriculum phase of the TEAM Project.

Definition of Important Terms

For the purpose of clarity and consistency in terminology, the writer offers the following definitions of words used in the text.

Curriculum

As it is used in this study, "curriculum" refers to the program of studies that a student would undergo in his formal education, either in total or in part. The program would include the content, learning activities, media, and strategies that comprise the total planned educational experiences that would be presented to the student. While this study is concerned only with the professional component of the teacher education program, thus viewing only the curriculum for prospective teachers that is unique to them, curriculum may refer to the total collegiate program just as appropriately. "Curriculum" is used synonymously with "program" in this study.

Content

That body of knowledge--facts, ideas, and concepts--which is to be gained by the teacher education student in the professional component comprises the "content" of the teacher education curriculum. "Content" is considered as the "subject matter" which is conveyed through various media and is intended to become part of the intellectual capacity and behavior of the student.

Media

In its broadest sense, media refers to any means of communication. This includes the teacher's voice, the printed page, television, films, filmstrips, film loops, slides, audiotape recordings, and videotape recordings. Media are the channels of communication through which content or percepts which create content are conveyed.

Multimedia

The use of two or more forms of media in conjunction with or in relation to one another in such a way that they are an integral part of the total teaching strategy is referred to as "multimedia" in this study.

Teaching strategy

A "teaching strategy" calls for the planned integration of content, media, method, personnel, and evaluation in an "instructional package." An important element is that the various facets of the total instructional experience must represent an optimal relationship among one another. A "teaching strategy" represents a deliberate and conscious selection of the various elements of the educational experience. Involved in this definition is the assumption that most teachers use a minimum of alternative methods and do not plan the teaching experience so that integration of content, media, method, personnel, and evaluation is achieved. A number of strategies must be assembled to create a curriculum or program.

Professional component

The particular courses, studies, or educational experiences which the teacher education student would undergo but which would not be required of any other students is referred to as the "professional component."

TEAM Project

The Teacher Education and Media (TEAM) Project was a project of the American Association of Colleges for Teacher Education (AACTE) to construct a new professional component for teacher education programs and to report upon the use of media as a means of achieving learning in teacher education programs.

AACTE member institutions

The American Association of Colleges for Teacher Education (AACTE) is not an organization to which individuals may belong, but is an organization based upon institutional membership. In order to belong, a college or university must be engaged in the preparation of teachers for elementary and/or secondary schools. A college or university which has membership in the AACTE is referred to as an AACTE member institution.

Representatives

Since individuals cannot belong to the AACTE, there are three persons from each institution who assume the responsibility of being representatives of the institution to the AACTE. The AACTE requests that the Chief Institutional Representative be the same individual from year to year. There are two other representatives who frequently are different each year, although not necessarily so. These representatives attend the yearly AACTE convention, receive AACTE publications, and provide a communicative link between the college or university and the AACTE.

Teacher education program

The total planned educational experiences which the teacher education student would receive but would not be required of other college students is called the "teacher education program." The program would include the content, methods, media, personnel, evaluation, and strategies which comprise the total educational experience. "Program" is used synonymously with "curriculum" in this study.

Model

A "model" as used in this study is a verbal or pictorial representation of an observable complex activity. By their very nature, teaching and learning cannot be completely abstracted into a word description or a diagram. Any verbal or pictorial representation will of necessity present only a partial description of the teacher's behavior. A model, to be truly useful, will be easily understood, simple in design yet complex in portrayal, and as nearly universal in application as possible.

Innovation

Miles says: "Generally speaking, it seems useful to define an innovation as a deliberate, novel, specific change, which is thought to be more efficacious in accomplishing the goals of a system."[18] Innovation is defined in this study as a change in the professional component of the teacher education curriculum at a given teacher education institution. The specific change being focused upon is the addition of some or all of the curriculum of the TEAM Project program.

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[18] Matthew B. Miles, Innovation in Education, p. 14.

Diffusion

The process by which innovation or change spreads to all segments of a given occupation, profession, system, or population is the process of diffusion. Innovation is the change whereas diffusion is the process by which innovation reaches all persons or groups to be affected.

Implementation

The process of incorporating an innovation either by an institution or a person in an institutional setting is known as implementation. Implementation involves the altering of such things as the existing course structures, curricula, methodologies, objectives, reading materials, and audiovisual aids. In this way, the new content, media, methods, learning activities, or strategies will become an integral part of the institutional program rather than a "tacked-on" portion of the educational experience.

Adoption

The personal or institutional act which signifies formal acceptance of and commitment to an innovation is called adoption. Adoption most generally will come after implementation has occurred. Implementation may have occurred only at the formal, legal level of catalog change when adoption takes place with the informal, practical implementation at the classroom level still remaining, however.

Introductory Report

The Introductory Report is an AACTE publication written by Herbert F. LaGrone and Desmond P. Wedberg, published in 1963, presenting the guidelines for the TEAM Project. The full title of this publication is An Introductory Report on a Project to Improve the Professional Sequence in Pre-Service Teacher Education through the Selective and Planned Use of New Media.

Proposal

The Proposal is an AACTE publication written by Herbert F. LaGrone, published in 1964, presenting the curriculum phase of the TEAM Project. The full title of this publication is A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education.

Conceptual Models

Conceptual Models is an AACTE publication edited by John R. Verduin, Jr., published in 1967, providing explanations of some of the sections of the TEAM curriculum as outlined in the Proposal and in Professional Teacher Education. The full title of this publication is Conceptual Models in Teacher Education.

Professional Teacher Education

The final report of the TEAM Project curriculum phase is referred to as Professional Teacher Education. This AACTE publication, published in 1968, presents the purposes and the teacher education program of the TEAM Project. The full title of this publication is Professional Teacher Education: A Programed Design Developed by the AACTE Teacher Education and Media Project.

External criteria

The writer formulated questions based upon principles of curricular design. These principles originated from outside the TEAM Project,hence the term "external criteria." The questions form a logical framework for the evaluation of teacher education programs.

Internal criteria

The TEAM Project authors formulated several criticisms of existing teacher education programs. The TEAM Project program supposedly overcame the shortcomings of existing programs. The criticisms of the TEAM Project authors were formulated into questions by the writer and were used to evaluate the TEAM Project program. These questions constituted the internal criteria by which the TEAM Project was judged in this study.

Organization of the Remainder of the Dissertation

Chapter two reviews the literature related to this study. The first section of this chapter presents materials concerning institutional change. The second portion of the chapter describes the background of the TEAM Project program. The third part of the chapter investigates the content of the TEAM Project curriculum phase. The fourth section presents those studies which relate to the usage of the subparts of the TEAM Project program.

Chapter three describes the procedures used in the study. A description of the questionnaire which served as the data-gathering instrument is the opening portion of the third chapter. The chapter continues with a discussion of the statistical measures used to analyze the data which are subject to statistical treatment. The third section of chapter three is devoted to a discussion of the selection of the population. A description of the non-statistical methods of evaluation used in this study conclude chapter three.

Chapter four presents and analyzes the data gathered by the questionnaire. The beginning portion of the chapter tells the results of the Iowa pilot study. The second section of the chapter is a statistical presentation and analysis of data gathered by the questionnaire. This second part presents and analyzes the data that relates to the acquaintance, evaluation, and adoption of the TEAM Project as reported by the representatives of the AACTE member institutions. The third portion of the chapter presents and evaluates the comments which the writer considered significant that were made by the representatives of AACTE member institutions.

Chapter five is the writer's analysis of the TEAM Project. Criteria for evaluating teacher education programs which originated outside the TEAM Project were first applied. The second portion of the chapter utilized internal criteria--principles of curriculum development from within the TEAM Project--to judge the program. A summary of chapters four and five concludes the chapter.

Chapter six summarizes and concludes the dissertation. After the problem is restated and the procedures of the study are described, the principal findings and conclusions are presented. The recommendations for further research that are prompted by the study are stated.

For the reader who is seeking an outline of the organization of the study, the writer would suggest that the table of contents of this study be rechecked.

CHAPTER II

REVIEW OF RELATED LITERATURE

To the writer's knowledge, no studies similar to the present study have been conducted. The review which is presented in this chapter, therefore, provides only background knowledge of: (1) innovations and (2) the TEAM Project program. The literature which is reviewed is intended to be representative rather than exhaustive. The readings which provided the background knowledge seemed most meaningful when grouped into the following areas:

1. information concerning institutional change and dissemination rate of innovative ideas;

2. the background, explanation of publications, objectives, philosophy, model for teacher behavior, model for a simple instructional system, rationale, criticisms of other programs, organization, use of media of the TEAM Project, and criticism of the TEAM Project;

3. the content proposed for the units of the TEAM Project program;

4. studies which have been made relative to the usage of the subpart(s) of the material used in the TEAM Project program.

Institutional Change

The period of time between the invention (or development) of an innovation and the complete (or near complete) usage within a given profession or industry is known as the period of diffusion.[1] When plotted on a graph, the period of diffusion begins slowly until about 10 per cent adoption occurs, rises sharply until all but the last 10 per cent have adopted, then levels out until adoption becomes total.[2] Mort discovered that the period of diffusion in educational institutions requires about 50 years.[3] His findings were based upon nearly 200 studies made at the Institute of Administrative Research. Diffusion has been occurring at an accelerating rate, however, since the beginning of the twentieth century.[4] Bushnell found that in 1957, only twenty years were needed to achieve 50 per cent diffusion. Carlson found that modern math diffusion was 88 per cent complete in six years in a study which he conducted.[5]

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[1] Paul R. Mort, "Studies in Educational Innovation from the Institute of Administrative Research: An Overview," Chapter Thirteen in Matthew B. Miles (ed.), Innovation in Education, p. 318.

[2] Everett M. Rogers, Diffusion of Innovations, pp. 152-159; Mort, "Studies in Educational Innovation. . .," in Miles (ed.), Innovation in Education, p. 318.

[3] Mort, "Studies in Educational Innovation. . .," in Miles (ed.), Innovation in Education, p. 318.

[4] Margaret Bushnell, "Now We're Lagging Only 20 Years," The School Executive, Vol. LXXVII (Oct., 1957), pp. 61-63.

Barrington's study was concerned with diffusion of innovations in teacher education institutions and associated laboratory schools.[6] He sent questionnaires to 176 public-supported teachers' colleges and normal schools, receiving 161 returns (91.5 per cent).[7] He found the same time span for adoption and the same diffusion curve when plotted on a graph as Mort discovered in his studies.[8] Barrington makes the recommendation:

> . . . that teacher-preparing institutions make more effective use of established associations such as the American Association of Colleges for Teacher Education, the American Council of Education, and the National Education Association, in order to reduce the time required for a new practice to diffuse through the various institutions.[9]

Some innovations never achieve complete adoption. By definition, however, an invention or development that is not accepted as sufficiently superior to the method, machine, or system it seeks to replace is not considered an innovation.[10] Thus, an innovation must receive at least partial adoption.

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[5] Richard O. Carlson, "School Superintendents and Adoption of Modern Math: A Social Structure Profile," Chapter Fourteen (pp. 329-341) in Matthew B. Miles (ed.), _Innovation in Education_, p. 332.

[6] Thomas M. Barrington, _The Introduction of Selected Educational Practices into Teachers' Colleges and Their Laboratory Schools_.

[7] _Ibid_., p. 44.

[8] _Ibid_., Chapter IV, pp. 44-83.

[9] _Ibid_., pp. 91-92.

Rogers uses an arbitrary division of the adoption process into five stages: 1) awareness; 2) interest; 3) evaluation; 4) trial; and 5) adoption.[11] The first stage (awareness) is achieved through simple exposure of the individual to the idea.[12] During the second stage (interest) the individual "seeks additional information."[13] Evaluation, the third stage, constitutes a "mental trial" in which the person reflects upon the innovation to determine if use of the innovation might not result in benefits.[14] In the fourth stage (trial) the individual "uses the innovation on a small scale."[15] If the trial is successful, adoption, the fifth stage, occurs in which the individual "decides to continue the full use."[16]

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[10] Rogers, Diffusion of Innovations, p. 13.

[11] Ibid., p. 81.

[12] Ibid., p. 81.

[13] Ibid., p. 82.

[14] Ibid., p. 83.

[15] Ibid., p. 84.

[16] Ibid., p. 86.

Rogers formulated a list of fifty-two generalizations concerning diffusion of innovations.[17] Among the generalizations which pertain to the rate of adoption are that the rate will depend upon the perception of the potential users in regard to "relative advantage," "compatability," "complexity," "divisibility," and "communicability of an innovation."[18]

Description of the TEAM Project Program

The TEAM Project has been underway for several years, has several publications, and is viewed in several ways by several people. As a result, the writer deems it helpful to consider the TEAM Project by topics. This portion of the chapter on related literature will be subdivided into the following subparts concerning the TEAM Project:

1. background
2. explanation of publications
3. objectives
4. philosophy
5. model for teacher behavior
6. model of a simple instructional system
7. rationale

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[17] *Ibid.*, pp. 311-314.

[18] *Ibid.*, p. 312

8. criticisms of other programs
9. organization
10. use of media
11. criticism of the TEAM Project

Background

The AACTE dates the upsurge of discontent of teacher education programs with the beginning of the space race.[19] Their conception of the situation is that the discontent had begun early in the twentieth century when educators such as John Dewey began calling for improvement in teacher education. Not until 1960 (circa) was there a seeking out of elements for improvement, however. Since about 1960, national attention, large expenditures, and professional activity have been directed toward the need.

Approximately one decade after Sputnik, the TEAM Project began. The AACTE and the AOTE were hoping that the discontent with teacher education programs could be solved by a vastly improved teacher education program developed by the project and utilized by the AACTE member institutions.[20] Since new curricula are "dependent upon new knowledge or the discovery of new relationships within existing knowledge" and since "recent studies of teaching by researchers. . . have produced valuable new knowledge of teaching. . ."[21] the time was opportune for a new teacher education program.

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[19] AACTE, Professional Teacher Education, p. 16.

[20] Herbert F. LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), pp. 70-76.

Explanation of publications

The first publication of the TEAM Project bears a December, 1963, copyright date.[22] The Introductory Report provided guidelines for the continuing work of the project. These guidelines included a list of the purposes of the project, a rationale upon which to base the proposed teacher education project, and a model to use in conceptualizing teacher behavior.

In August of 1964, the materials contained in the familiar Proposal were presented as a working paper to two-hundred-plus participants of the AACTE School for Executives which met at Oneonta, New York. The next month, September, the Proposal was prepared for printing so that copies of it could be sent to every AACTE member institution. The Proposal represents the efforts of LaGrone and the assistants and advisers from the AACTE and AOTE to develop "a," not "the," teacher education program that is better than the traditional programs. The Proposal was to be used as a "basic working paper" for faculty study groups" devoted to improved teacher education.[23] The Proposal includes the purposes and rationale that were found in the Introductory Report, but does not include the model for conceptualizing teacher behavior. The teacher education program contained in its pages is in outline form with a bibliography of numerous studies related to education that LaGrone believes pertinent to the professional component of teacher education. Since the Proposal is an outline, it must be viewed as a study guide for faculty study groups and not as a textbook for undergraduate students. The reader of the Proposal needs to refer constantly to the references cited by the combined outline-bibliography entries.

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[21] Ibid., p. 72.

[22] LaGrone and Wedberg, Introductory Report.

A publication of much significance to any astute scholar of the TEAM Project is Conceptual Models. The author, John R. Verduin, Jr., acted as the director of an academic year study of the Division of Education at the State University of New York College at Geneseo. During the seminars which were held at Geneseo, thirteen educational researchers from across the nation presented their ideas and thinking to the assembled faculty. These researchers represented some of the major studies contained in the various sections of the Proposal. It was the task of the thirteen consultants to interpret their studies in such a way that the implications for teacher education were clarified for the Geneseo faculty. Verduin, acting as a recording secretary, has written his conception of the reports of the consultants in the booklet, Conceptual Models, published in 1967. The interpretive role which Conceptual Models performs upon the ideas outlined in the Proposal and Professional Teacher Education secures an important place for it in TEAM Project literature.

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[23] Lawrence, "Foreword" in LaGrone, Proposal, p. iv.

The latest publication to stem from the TEAM Project is Professional Teacher Education. It incorporates the same purposes as the Introductory Report and the Proposal, a more detailed rationale than either of these other two publications, a similar model for conceptualizing teacher education but with a more sophisticated explanation plus the same outline-bibliography as the Proposal. There are a few more details concerning the background of the Project contained in Professional Teacher Education, also. Its contribution, then, is in the refinement of the rationale and the model. The "Simple Instructional Model" (see Figure 2, infra p. 41) was another addition.

In addition to these four publications, the only other writings concerning the curriculum component of the TEAM Project have been articles in yearbooks and periodicals describing the purposes or rationale of the TEAM Project, providing a criticism of the TEAM Project, or describing the TEAM Project workshops.[24]

Objectives

According to the contract agreement with the federal government, the TEAM Project was to accomplish a number of specific tasks. First, guidelines for instructional units were to be developed for the professional component of teacher education. These guidelines were to include the appropriate use of new media, the teacher competencies being developed, the content to be used, and the learning experience to be undergone in the instructional unit. A second task was to develop these guidelines into instructional unit plans and proposals that would be multimedia instructional units. Third, these units were to be organized into new courses of instruction that used multimedia presentation. Fourth, projects were to be designed to demonstrate and evaluate the new multimedia instructional units. Fifth, reports were to be made concerning the value of multimedia instruction in teacher education. The sixth task was to be the creation of "a resource file and clearinghouse of materials and information which will serve as a foundation for the development of technological instructional units for teacher education."[25]

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[24] To the writer's knowledge the following are all of the articles in yearbooks and periodicals written about the curriculum component of the TEAM Project: Herbert F. LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the American Association of Colleges for Teacher Education (1965), pp. 219-229, (same article reprinted in Theoretical Bases for Professional Laboratory Experiences in Teacher Education, Forty-Fourth Yearbook of the Association for Student Teaching [1965], pp. 93-104); Asahel D. Woodruff, "Implications for Institutional Action," Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 230-236 (same article reprinted in Theoretical Bases for Professional Laboratory Experiences in Teacher Education, Forty-Fourth Yearbook of the Association for Student Teaching [1965], pp. 105-113); Herbert F. LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), pp. 70-76; Walter J. Mars, "AACTE Workshop in Teacher Education," Audiovisual Instruction, Vol. XII (Dec., 1967), pp. 1046-1048. In addition to these six articles (actually four articles since two had duplicate publishing), there was a summary of round-table discussions of the TEAM Project at the 1965 AACTE Convention entitled "Direction and Strategies for Constructive Actions," in Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 237-238.

Philosophy

The TEAM Project is based upon a particular theory or philosophy of teacher education.[26] Teaching is considered in terms of behaviors. Teacher education should be based upon these behaviors with the improvement of competency in the performance of these behaviors as the goal. Because of this theory providing the basis of the TEAM Project, a shift occurs in relative emphasis from the recall of content to the performance of knowledge. Teaching is viewed as a process that can be measured and objectively analyzed rather than being open only to subjective criticism. Thus, the dichotomy between subject matter and internship which occurs in the traditional teacher education program is not only unnecessary but untenable. The performance of certain skills is the only valid measure of learning. A desirable program would not reject subject matter, utilizing only internship, however, since performance without theoretical undergirding does not provide the teacher with the needed intellectual understanding of teacher activities.

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[25] LaGrone and Wedberg, Introductory Report, pp. 1-2; Lawrence, "Foreword" in LaGrone, Proposal, p. iii.

[26] LaGrone and Wedberg, Introductory Report, pp. 3-5 especially; LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 219-229.

Model for teacher behavior

As a means of envisioning the dynamic nature of teaching with the multiple variables that must be considered by the teacher in deciding upon a course of action, the project staff developed the "Model for the Dynamics of Teaching." (See Figure 1.) In addition to portraying teaching as a choice-making, dynamic activity, it serves

EDUCATIONAL EXPERIENCES
(Pupil Learning; Cognitive, Affective, Psychomotor)

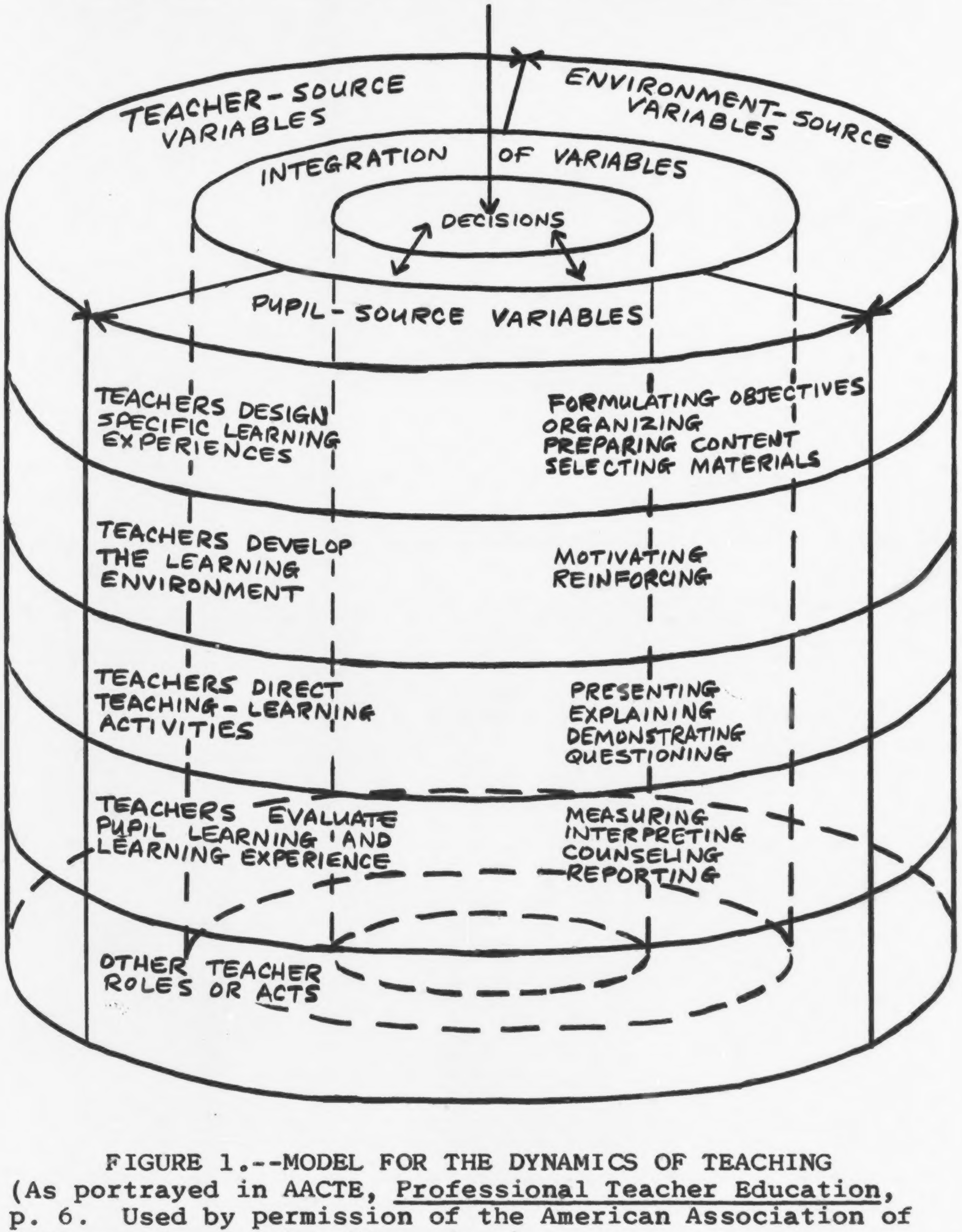
TEACHER-SOURCE VARIABLES
ENVIRONMENT-SOURCE VARIABLES
INTEGRATION OF VARIABLES
DECISIONS
PUPIL-SOURCE VARIABLES
TEACHERS DESIGN SPECIFIC LEARNING EXPERIENCES
FORMULATING OBJECTIVES
ORGANIZING
PREPARING CONTENT
SELECTING MATERIALS
TEACHERS DEVELOP THE LEARNING ENVIRONMENT
MOTIVATING
REINFORCING
TEACHERS DIRECT TEACHING-LEARNING ACTIVITIES
PRESENTING
EXPLAINING
DEMONSTRATING
QUESTIONING
TEACHERS EVALUATE PUPIL LEARNING AND LEARNING EXPERIENCE
MEASURING
INTERPRETING
COUNSELING
REPORTING
OTHER TEACHER ROLES OR ACTS

FIGURE 1.--MODEL FOR THE DYNAMICS OF TEACHING
(As portrayed in AACTE, Professional Teacher Education, p. 6. Used by permission of the American Association of Colleges for Teacher Education.)

as a basis for curriculum development of the teacher education program. While only four of the activities teachers perform are portrayed on the outer, vertical surface of the cylinder, other activities are given opportunity for inclusion.[27]

The model has an end surface (the top of the cylinder) consisting of concentric rings. The outer ring is divided into three sections--the variables of the environment, pupil, and teacher--which impinge upon the teaching situation. The middle ring indicates that the environment, pupil, and teacher variables must all be jointly considered as the teacher achieves an "integration of variables" leading to the "educational experiences." The "core" then is the "educational experience," which is the "decision" that the teacher reached on the basis of integrating the variables.[28]

Each section of the outer ring may be further subdivided. Teacher-source variables include the values, attitudes, interests, physical characteristics and abilities, self-concept, emotional and social adjustment, knowledge, and abilities of the teacher. In like manner, the pupil-source variables include the values, attitudes, interests, physical characteristics and abilities, self-concept, emotional and social adjustment, knowledge, and abilities of the individual students and the group-concept, group adjustment, group values, and other group factors. The environment-source variables are factors external to the teacher and student which exert influence upon the teacher, student(s), and teaching-learning situation. It is stated in Professional Teacher Education:

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[27] AACTE, Professional Teacher Education, pp.6-7.

[28] Ibid., pp. 4-10.

> This is a complex variable group that includes subject content, selected aims and objectives, teaching resources or aids, methods or techniques, the local and larger community influences, and the institutionally related factors of policy, organization, administration, and facilities.[29]

The cylinder is split into a number of horizontal levels. This indicates that each educational experience has a number of teacher-functions that must be performed; teachers must design, develop, direct, and evaluate each educational experience. While these four functions are not discrete and were not intended to be, they do indicate the multi-faceted role of the teacher in choice making.[30]

Model of a simple instructional system

The TEAM Project staff created an operational definition of an instructional system which states:

> An instructional system provides an optimal interdependent relationship among the

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[29] AACTE, Professional Teacher Education, p. 5.

[30] Ibid., p. 7.

> components of *content*, *learning*, and *communication* within an *environment* for a defined *purpose* (or purposes).[31]

Based upon this definition, the model entitled "Simple Instructional System" (Figure 2) was developed.

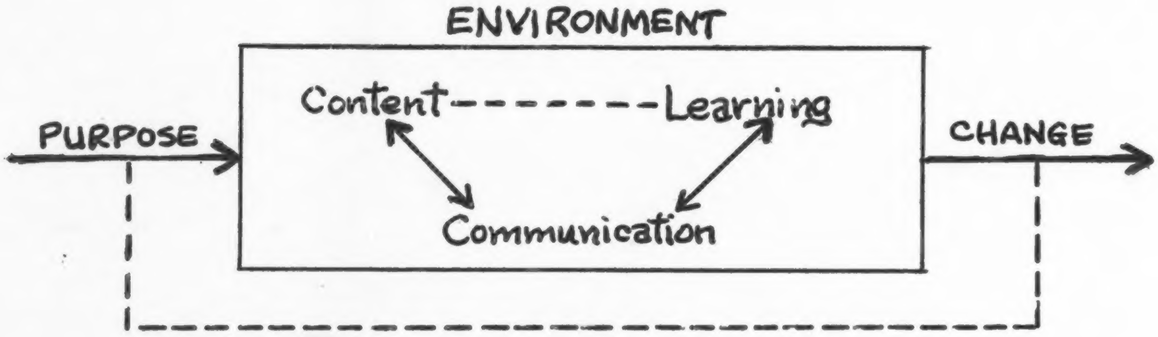

FIGURE 2.--SIMPLE INSTRUCTIONAL SYSTEM (As portrayed in AACTE, *Professional Teacher Education*, p. 66. Used by permission of the American Association of Colleges for Teacher Education.)

Rationale

The rationale[32] for the TEAM Project program is based upon the cybernetic model of the "Cognitive Cycle" as developed by Woodruff.[33] According to Woodruff's

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[31] *Ibid.*, p. 65.

[32] LaGrone, Proposal, pp. 1-8; AACTE, *Professional Teacher Education*, pp. 17-24.

[33] Asahel D. Woodruff, "The Use of Concepts in Teaching and Learning," *The Journal of Teacher Education*, Vol. XV (March, 1964), pp. 81-99. See also, Woodruff, "Characteristics of an Effective Instructional Unit," working paper prepared for Academic Year Study, State University College, Geneseo, New York, April 14, 1966 (mimeo.); Woodruff, "Putting Subject Matter into Conceptual Form," paper prepared for TEAM Project meeting, February 6, 1964 (mimeo.); Woodruff, "The Nature and Elements of the Cognitive Approach to Education," paper, May 28, 1964 (mimeo.).

"Cognitive Cycle," learning takes place through a four-step process. The first step is that of perceptual input or sensory intake. Perception occurs when the events and objects of a person's experience are registered through the various bodily sense organs. The sensory input of what we see, hear, taste, touch, feel, and smell from the world around us become the perceptions that we use for the creation of meaning.

The second step in the "Cognitive Cycle" is that of concept formation, storage, and organization. The perceptions from the sense organs as they register the experiences of the person are received into the person's intellect. It is the duty of the intellect to receive these perceptions and do something with them, whether it be to exercise a conditioned response, to perform thinking so that a concept which gives meaning to the experience is formed, or to store the happening of the event.

The third step in Woodruff's model is the decision-making phase. At this point the individual is using the concepts formed in the second step based upon the sense perceptions of the first step. This is a choosing process. He is deciding what the outcomes will be of placing into action the concepts which he formed in the second step. If he decides that the probable outcomes are desirable, a choice will be made to initiate activity.

The fourth step is that of "doing" or "trial." In this step, the person tests or validates the concept which he has formulated. This is an activity phase. Without this portion of the "Cognitive Cycle," the individual is restricted to receiving, storing, and thinking about knowledge while never having the opportunity to observe the results of the application of knowledge. Without application, concepts which the person has formed cannot be altered due to the heightened comprehension which the person can gain only by trying them out. Utilizing this step enables the scientific process to replace verbalization. Since trial will involve an encounter with the physical world, this fourth step will result in experiences which form the basis of another "step one" in the "Cognitive Cycle." The end product of one cycle thus becomes the raw material for the next cycle. As a result, it is appropriate to speak of the connecting link between steps four and one as the "feedback" process or loop.

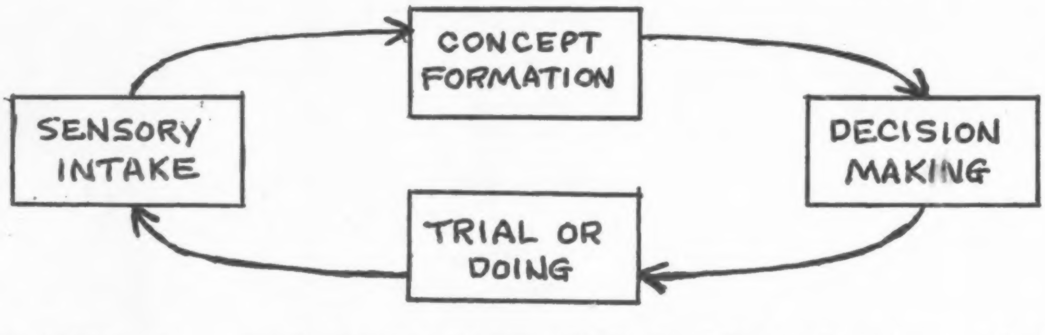

FIGURE 3.--THE COGNITIVE CYCLE (Based upon similar diagrams found in Asahel D. Woodruff, "The Use of Concepts in Teaching and Learning," The Journal of Teacher Education, Vol. XV March,[1964], p. 87; LaGrone, Proposal, p. 5; AACTE, Professional Teacher Education, p. 18. Used by permission of the author.)

Criticisms of other programs

The TEAM Project program is based upon a definite view of teacher education. Since it does present a challenge to existing programs of teacher education, part of the writings about the TEAM Project are an attempt to explain the superiority of the TEAM Project approach.[34] The comparisons which result offer constructive criticism concerning our traditional efforts to educate prospective teachers.

The TEAM Project program is based upon the assumption that teaching can be improved through cognitive development of certain components of the teaching-learning process. Programs such as Conant's internship program or programs that call for no professional preparation are inadequate because they lack the view that teaching requires a specialized type of knowledge.[35] If most or all of the education that a prospective teacher were to receive came from internship, the chance for development beyond the ability level of the master teacher would be severely limited. Conant's type of approach places teaching in a role unique among all other fields since we depend upon the accumulated knowledge of many people in most if not all "domains of knowledge," whereas Conant does not view teaching as needing accumulated knowledge.[36]

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[34] Asahel D. Woodruff, "Implications for Institutional Action," Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 230-236; Herbert F. LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 219-229.

[35] LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 221-224.

(2)

The problem with most of the experimental programs currently offered is that they are not built upon a sound theoretical foundation. They usually do nothing more than add or substitute within the traditional program. If these programs had been well thought out, they would have begun with entirely different content, structure, and method rather than manipulating the existing curriculum, placing it into a different sequence, giving a new title to a course, or adding an observation requirement here or there.[37]

Since most competition is offered by the traditional curriculum, it is here that the deepest examination needs to occur. In addition, most experimental programs as well as Conant's program in part may be subsumed under the remaining criticism.

The traditional program has no organizing center for pulling together all of the content or topics so that they have a common focal point. In fact, the traditional program disassociates knowledge that might have been related by placing it into subdivisions that are useful for "research and specialization" but are too broad and unrelated for the undergraduate teacher education candidate. What needs to be done in the teacher education program is for the needed portions of each of such fields as educational psychology, philosophy of education, history of education, administration, measurement, and guidance to be organized around a focal point so that their interrelationships among one another and their relationships to teaching can be clearly seen.[38] The TEAM Project program, using an objective and analytical approach to cognitive learning, has created the teaching-learning situation as an organizing center.[39]

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[36] Ibid., p. 222.

[37] Ibid., p. 224.

The traditional program does not utilize the power, structure, and economy of the discipline when it subdivides the discipline of education into unrelated subtopics.[40]

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[38] Ibid., pp. 220-221.

[39] Ibid., pp. 225-227.

[40] Ibid., pp. 220-221. (The work of Jerome S. Bruner, "Some Theorems on Instruction Illustrated with Reference to Mathematics," Theories of Learning and Instruction, The Sixty-Third Yearbook of the National Society for the Study of Education, Part I [1964], pp. 306-335, was utilized extensively in the development of this particular criticism.)

A unified approach to a discipline, such as the TEAM Project program offers, enables a generative power within the discipline to be released.[41]

The traditional program is not economical. It teaches more than the teacher needs to know from within each subdivision of education such as educational psychology. Since time is wasted through teaching unneeded material, there is material that is untaught that needs to be taught unless an overabundance of time is spent in course work. Such wastage of time is uneconomical when we consider the knowledge explosion which requires that we be economical in presenting in order to include the new knowledge that is valuable.[42] The TEAM Project program presents a much more economical program. It includes only that material which the teacher will need to know, supposedly, and it includes much of the newer knowledge.[43]

Teaching is a decision-making activity; the teacher's professional preparation should be accomplished in a context that requires the choosing of alternatives.[44] The learning theory underlying most traditional programs and accompanying course work is one that calls for factual memorization rather than choice making. This causes a dichotomy between theory and practice.[45] The TEAM Project program correlates theory and practice, making each unit a combined theory and practice decision-making process.[46]

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[41] Ibid., p. 227.

[42] Ibid., pp. 220-221.

[43] Ibid., pp. 225-227.

[44] Ibid., p. 226.

Organization

The several units which the TEAM Project program constructed are organized into five courses.[47] All units from within any given course supposedly interrelate. As a result, there should be a common element running through all units within a course.

Course I is entitled "Analytical Study of Teaching." Through an analytical, systematic study of recorded teaching situations, it is hoped that the student will enlarge his conception of teaching rather than continue to view teaching in the same way that he had viewed it prior to studying teaching with these analytical tools.[48] The analytical models which are presented in this section need to be presented in accordance with the theory of learning and of teaching contained in Woodruff's "Cognitive Cycle." This means that the model must be presented through a perceptual input process. It also means that there must be recorded situations introduced for perceptual input so that the concept which the model helped form can be utilized and tested in accordance with the recorded situations. Some, if not all, of the recorded situations should be analyzed according to several or all of the analytic models for conceptualizing the teaching-learning situation.[49]

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[45] Ibid., pp. 220-221.

[46] Ibid., pp. 226-229.

[47] Professional Teacher Education refers to the groups of units as areas; the Proposal calls these groupings "courses." This study uses the terminology of the Proposal since the questionnaire uses this terminology.

[48] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), p. 75; LaGrone, Proposal, p. 16; AACTE, Professional Teacher Education, p. 32.

Course II is named "Structures and Uses of Knowledge." This course is intended to help the prospective teacher "analyze content, put elements of the knowledge in instructional form and assess certain logical operations performed in teaching the content."[50] The various concepts which are used in this course should be taught according to Woodruff's rationale, but the learning situation seems to lend itself more to programed learning than to recorded situations as did Course I.[51]

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[49] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), p. 75; LaGrone, Proposal, p. 16; AACTE, Professional Teacher Education, p. 32.

[50] LaGrone, Proposal, p. 30; AACTE, Professional Teacher Education, p. 42.

Course III bears the title "Concepts of Human Learning and Development." The content in this course is intended to aid in an understanding of cognitive growth and mental processes.[52] The trial phase of Woodruff's "Cognitive Cycle" would, according to LaGrone, be best accomplished by micro-teaching;[53] the writer believes that a combination of small-group evaluation, recorded situations, and programed learning would be best for the first three courses with micro-teaching being used mainly in Courses IV and V.

Course IV is called "Designs for Teaching-Learning." It is an integrative course, bringing together the concepts of teaching behavior, structure of knowledge, and learning processes from Courses I, II, and III. The prospective teacher becomes involved in planning the teacher activities and selecting the content for a chosen type of cognitive learning so that behavior, knowledge, and process are seen as parts of a whole.[54]

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[51] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), p. 75.

[52] Ibid.; LaGrone, Proposal, p. 39; AACTE, Professional Teacher Education, p. 50.

[53] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol LI (March, 1965), p. 75.

Course V is termed "Demonstration and Evaluation of Teaching Competencies." It is, like Course IV, an integrative course since it utilizes the learnings of Courses I, II, and III; it is different than Course IV since Course IV is a conscious attempt to show how integration is achieved whereas Course V focuses upon the prospective teacher as he engages in various trial situations. In addition to demonstrating competencies, the prospective teacher should be able to evaluate his performance and rethink his original strategy. The final objectives of this course are to engage the student in theories of instruction and planning for professionalism.[55]

Use of media

The TEAM Project has assumed that instruction is the interaction of content, learning process, and materials. Whenever one of these three elements is a "given," then the other two are automatically determined. Content can be of three basic types. If content is to result in verbal or symbol patterns, then the learning process will be memorization; and the materials will be textbooks and other verbal materials. If content is to result in performance abilities, then the learning process will be practice of overt acts; and the materials will be practice situations or equipment. If content is to result in concepts, then the learning situation will be perceptions and tryouts; and the materials will be real referents, media for portraying real referents, and trial or simulated situations.

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[54] LaGrone, Proposal, p. 48; AACTE, Professional Teacher Education, p. 57.

[55] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), p. 76; LaGrone, Proposal, p. 53; AACTE, Professional Teacher Education, pp. 60-61.

The TEAM Project views media as an effective agent in the accomplishment of conceptual learning. Real referents at a particular time and place with the right kind of focus being created is a difficult thing to accomplish. Media can solve the problems of time and place. In addition, media can control the environment. Thus, only those aspects that the teacher wants seen will be viewed; short segments and replays can be utilized; even speed of motion and magnification of the object being viewed can be controlled. Most importantly, concepts are learned rather than symbol patterns, verbal patterns, or performance abilities.[56]

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[56] LaGrone, Proposal, pp. 11-14; AACTE, Professional Teacher Education, pp. 29-30, 65-66.

Criticism of the TEAM Project

The 1965 AACTE Convention included one session in its program for an evaluation of the Proposal.[57] This round-table discussion session resulted in a number of "strengths," "weaknesses," "potentials," and "dangers" being identified. The strengths included the stimulation of an "intellectual" view of teaching; a more organized approach to teaching; the inclusion of recent research from teaching, learning, and technology; and, an empirically testable model of teaching. The "potentials" were: the Proposal provides a guide for faculty study groups; new areas of teacher effectiveness are presented; irrelevant material is eliminated; and, college teachers may be used more effectively. The "weaknesses" envisioned were: teaching is viewed too routinely; the intuitive and subjective are neglected; teacher education is depersonalized; and, too great of a focus is placed upon those phases of education that have been researched to the neglect of non-research-based topics. The "dangers" foreseen were: the Proposal may be considered an educational panacea; rigidity of the concept of teaching may result; the cost of complete adoption is prohibitive; and, rapid adoption may cause confusion. This session provided the only public, published evaluation of the Proposal prior to this study.

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[57] "Direction and Strategies for Constructive Action," Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 237-238.

Description of the Content of the TEAM Project Program

The content outline of the TEAM Project program has been presented in both the Proposal and Professional Teacher Education in identical form. Using these two writings for the format and the writings to which they refer as source materials, the writer offers the following description of the Project program.

There are five courses into which the content has been divided. Each course contains a number of topics that are related. Each topic within the course serves as a content subdivision for concept formation. Each course provides a group of related concepts that make up a needed course of learning for the prospective teacher.

Analytical Study of Teaching--Course I

Through an anlytical, systematic study of recorded teaching situations, it is hoped that the student will enlarge his conception of teaching rather than continue to view teaching in the same way that he had viewed it prior to studying teaching with these analytical tools.[58] Each of the units in this course presents a different model for the viewing of teaching behavior.

A Concept of Teaching. Smith presents teaching as more than a unidirectional flow of information from the teacher to the student.[59] He presents the idea that in the teaching-learning situation, the teacher is an independent variable, the pupils are dependent variables, with learning being the intervening variable. Learning modifies the effect of the independent variable upon the dependent variables. Teaching behavior is a combination of the verbal behavior, activities, and expressions ("bodily posture, facial expressions, tone of voice, expression of the eyes, and other ways") of the teacher.[60] If teaching behavior is of such a nature that it induces learning, then pupil behavior (verbal, activity, and expressive) will be influenced. The wise teacher is one who realizes that if his actions induce learning, the students will respond in certain semi-predictable fashions; if his actions do not induce learning, the students will respond in certain other semi-predictable manners. When learning is not occurring, the teacher should modify his behaviors so that learning does occur.

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[58] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), p. 75; LaGrone, Proposal, p. 16; AACTE, Professional Teacher Education, p. 32.

[59] B. Othanel Smith, "A Concept of Teaching," in B. Othanel Smith and Robert H. Ennis (eds.), Language and Concepts in Education, Chapter VI, pp. 86-101; B. Othanel Smith, "A Concept of Teaching," Teachers College Record, Vol. LXI (Feb., 1960), pp. 229-241; LaGrone, Proposal, pp. 16-17; AACTE, Professional Teacher Education, pp. 32-33.

[60] Smith, "A Concept of Teaching" in Smith and Ennis (eds.), Language and Concepts in Education, p. 98.

Based upon this explanation of the teaching-learning situation, Smith created his concept of the teaching-learning cycle. He diagramatically shows that the teacher has a perception of the teaching situation, including content, teacher ability, and students' abilities. This perception will lead to a diagnosis of what the teacher should do. The diagnosis will lead to action. As soon as the teacher has acted, each student will perceive the situation, diagnose the meaning in terms of his background, and react. Based upon the reactions of the students, the teacher should alter his perception, make another diagnosis, and react. The cycle continues on, the essential elements of teacher perception, diagnosis, and reaction followed by student perception, diagnosis, and reaction reoccurring until the cycle is broken by a change in the situation.[61]

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[61] Ibid., pp. 90-94.

Paradigms, Models or Schema for Teaching. Paradigms help a person identify variables and conceptualize relationships between and among variables. A paradigm must, by definition, apply to all cases within a group of events or processes. Thus, the paradigm must be specific enough to show the variables involved and their relationships, while being general enough to include a whole class rather than only one instance. Through the use of various geometric shapes, lines, and location, the paradigm illustrates the relationships among variables.[62]

The value to prospective teachers is two-fold. First, the prospective teacher will have to perceive the relationships among variables before he can diagram them. Thus, he will be required to perform careful analysis of the teaching situation to come to the perception of relationships that is needed to draw such a diagram. Second, he will have to utilize his reasoning powers in order to perceive the relationship between the drawing and the real-life classroom situation as he explains the diagram.

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[62] N. L. Gage, "Paradigms for Research on Teaching," in N. L. Gage (ed.), Handbook of Research on Teaching, Chapter III (pp. 94-141), pp. 95-96; Elizabeth Steiner Maccia, George S. Maccia, and Robert E. Jewett, Construction of Educational Theory Models (U.S. Office of Education, Cooperative Research Project No. 1632), The Ohio State University, 1963; LaGrone, Proposal, pp. 18-19; AACTE, Professional Teacher Education, p. 33.

In either instance, the student's perceptual powers could be extended.[63]

Interaction Analysis. Flanders and his associates have developed a system for categorizing classroom verbal interaction which also measures "classroom climate." In Flanders' system of Interaction Analysis, there are ten categories in which to classify classroom talk. Seven of the categories are used to classify what the teacher says. Four of the seven teacher-talk categories are of the type that tend to free the student. These four categories are: (1) accepting student feelings, (2) praising or encouraging the student, (3) accepting or using student ideas, and (4) asking questions. The other three of the seven teacher-talk categories tend to limit the freedom of the student. These three are: (5) lecturing, (6) giving directions, and (7) criticizing students or justifying the teacher's authority. Two of the ten categories are for recording student talk: (8) student talk in response to a teacher's question, and (9) student talk initiated by the student. The tenth category is for recording silence, short pauses, or confusion resulting from many speaking at once.

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[63] Verduin, Conceptual Models, pp. 27-31; LaGrone, Proposal, pp. 18-19; AACTE, Professional Teacher Education, p. 33.

Flanders provides a detailed description of each of these ten categories plus a set of rules so that confusion between two categories is eliminated. A trained observer can record according to Flanders' rules and instructions with a high degree of accuracy. The tallies which are recorded in serial fashion are tabulated into a ten-column, ten-row matrix by pairs, each number in the series being used first as a row designation number, then as a column designator. According to the frequency, duration, and sequence of cells used in the matrix, a number of inferences and conclusions may be reached about the social climate and verbal patterns of the classroom observed.[64]

Pedagogical Moves and Teaching Cycles. Another means of analyzing verbal interaction has been devised by Bellack and associates. This system classifies according to pedagogical activity and meaning. Bellack found that each teaching cycle was composed of an initiating maneuver and a reflexive maneuver. Initiating maneuvers are of two types: structuring or soliciting. Structuring moves are those which direct the classroom activities by creating a context for what is to happen next. Soliciting moves are those which direct the classroom activities by instructing a person or persons to respond. Reflexive maneuvers are of two types: responding or reacting. Responding moves are made in direct answer to a soliciting move. Reacting moves may occur after a structuring, soliciting, responding, or another reacting move but are made spontaneously rather than being elicited by these other moves.

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[64] Edmund J. Amidon and Ned A. Flanders, The Role of the Teacher in the Classroom; Ned A. Flanders, Teacher Influence, Pupil Attitudes, and Achievement; Ned A. Flanders, "Intent, Action, and Feedback: A Preparation for Teachers," Journal of Teacher Education, Vol. XIV (Sept., 1963), pp. 251-260; Verduin, Conceptual Models, pp. 32-43; LaGrone, Proposal, pp. 19-20; AACTE, Professional Teacher Education, pp. 34-35.

In addition to being able to classify according to type of maneuver and type of move, Bellack found that the moves themselves could each be classified into two of four types of meanings. These four types of meanings are used in pairs so that there are two pairs of meanings which the students and teacher could theoretically use. The one type is called substantive meaning which has an accompanying substantive-logical meaning. The other pair of meanings is instructional meaning and its accompanying instructional-logical meaning. A statement which is made in regard to subject matter is said to have a substantive meaning. A statement made in reference to classroom management factors has an instructional meaning. Both substantive and instructional meanings can be classified according to the logical processes involved in dealing with the subject matter or instructional directions.

These logical processes include defining, interpreting, fact stating, explaining, opining, and justifying.[65]

A number of findings were made concerning the frequency, order, speaker (teacher or pupil), and logical processes in the teaching cycle. These have decided implications for education.

Logical Aspects of Teaching. Smith and Meux[66] were interested in the logical operations of verbal behavior in the classroom, just as verbal behavior was analyzed by Flanders to determine the socio-psychological effects and by Bellack to determine the pedagogical operations. By "logical operations," Smith and Meux refer to those verbal procedures utilized by the teacher in order to induce learning in the students. The "logical operations" are an important focal point for prospective teachers, because these operations represent a variable which a teacher can change as a result of choice making.

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[65] Arno A. Bellack, et al., The Language of the Classroom; Verduin, Conceptual Models, pp. 44-54; LaGrone, Proposal, pp. 20-21; AACTE, Professional Teacher Education, pp. 35-36.

[66] B. Othanel Smith and Milton O. Meux, A Study of the Logic of Teaching; B. Othanel Smith and Milton O. Meux, "A Study of the Logic of Teaching," in Ronald T. Hyman (ed.), Teaching: Vantage Points for Study, pp. 101-117; Verduin, Conceptual Models, pp. 6-15; LaGrone, Proposal, pp. 21-22; AACTE, Professional Teacher Education, p. 36. See also Milton O. Meux and B. Othanel Smith, "Logical Dimensions in Teaching Behavior," Chapter V, pp. 127-164 in Bruce J. Biddle and William J. Ellena (eds.), Contemporary Research on Teacher Effectiveness; B. Othanel Smith, "A Concept of Teaching," Teachers College Record, Vol. LXI (Feb., 1960), pp. 229-241; B. Othanel Smith, "Logic, Thinking, and Teaching," Educational Theory, Vol. VII (Oct., 1957), pp. 225-233; B. Othanel Smith, et al., A Tentative Report on the Strategies of Teaching.

The logical operations which Smith and Meux were able to identify were: defining, describing, designating, stating, reporting, substituting, evaluating, opining, classifying, comparing and contrasting, conditional inferring, explaining, and directing and managing the classroom. All of the verbal behavior which Smith and Meux observed could be placed into one of these thirteen categories. Lack of clarity in teaching a concept or principle can usually be traced, when a tape or transcript of a lesson is analyzed, to the omission of one or more of these logical operations in the lesson sequence.

Another reason for lack of clarity is failure to utilize the rules of logic in handling the logical operations. There are definite rules of logic that apply to each of the logical operations. If a teacher does not know his subject matter adequately and cannot handle it with facility, these rules of logic are apt to be broken.

Smith considers logic, language, and knowledge to be highly interrelated in the teaching situation.[67]

The Concept of Teaching Strategies for Cognitive Development. Taba considers another aspect of verbal behavior; she is concerned with the role verbal behavior has in the development of critical thinking. Because of the complexity of Taba's research, only a small part of it is proposed in the TEAM Project program. Taba's thesis is that there are certain teaching strategies which must be followed if critical thinking is to be developed productively. Thinking is not dependent upon a large body of factual knowledge; nor is it an automatic by-product of memorizing certain subject matter; nor is it the mastery of procedures in a certain order. Rather than any such passive processes, Taba stresses an active process for students, with teachers guiding this process through skillful questioning.

Taba has separated thought processes or cognitive tasks into three categories. They are: concept formation;

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[67] Smith and Meux, *A Study of the Logic of Teaching*; Smith, "Logic, Thinking, and Teaching," *Educational Theory*, Vol. VII (Oct., 1957), pp. 225-233; Smith, *A Tentative Report on the Strategies of Teaching*; Meux and Smith, "Logical Dimensions in Teaching Behavior," in Biddle and Ellena (eds.), *Contemporary Research on Teacher Effectiveness*; Verduin, *Conceptual MOdels*, pp. 6-15; LaGrone, *Proposal*, pp. 21-22; AACTE, *Professional Teacher Education*, p. 36.

the interpretation of data or the making of inferences; and, the application of facts and principles. Concept formation has three processes involved in it: enumerating or listing, grouping, and labeling. Interpretation of data also has three subgroupings: identifying specific points, explaining specific items or events, and inferring. There are three sublevels of the application of facts and principles: predicting or analyzing, developing causal links, and verifying causal links. It is the teacher's responsibility to see that there is an orderly progression within each of these tasks. The teacher must be certain that discussion does not change from one cognitive task to another until the first task has been completed.

While it is not essential that the beginning student have complete comprehension of the above processes and subgroups, he should recognize that there are certain principles to follow. One is that there are not only types of questions, but that there are series of questions that go together. A second principle is that within each series of questions there is an orderly progression from the simpler operations to the more complex. Third, when questioning is being directed toward the end of concept formation, for example, the teacher must not switch to a different type of process, such as interpreting.

Skillful questioning requires that teachers discern and utilize the hierarchical nature of thought. Thus, descriptive information must precede classifying or comparing and contrasting. The simpler operations must precede the more complex. The teacher who does not follow this hierarchical pattern will find that thought is sustained only at the lowest level and boredom will ensue.

If sufficient time is not spent at any one level of thought before preceding to the next, the discussion will revert to the lower level. Or, if the teacher attempts to jump up several levels at once when raising the level of thought, the discussion will stabilize at the original, lower level. Proper pacing of questioning is highly important, then.

Teachers must be certain that their teaching strategies are so arranged that a clear conception of the various facts, ideas, and concepts being used in the lesson is established. Faulty or inaccurate conceptions will lead to improper organization and unproductive thinking.

The most important factor in changed education is the properly functioning teacher, a person who skillfully guides learning through asking questions that cause the students to become involved.[68]

Nonverbal Communication in the Classroom. Hall and Galloway write about different aspects of that predominately silent world of non-verbal behavior. Hall tells about the persistent, non-verbal meanings which are part of a culture. There are meanings associated with the human activities of time, space, interpersonal relationships, social structure, occupations, sexual differences, education, recreation, protection, and ownership that vary from one culture to another. In a pluralistic culture such as we have in the United States, several cultural meanings are found for each of these human activities. Lack of knowledge about subcultural meanings can create a situation in which the teacher is incapable of communicating with students.[69]

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[68] Hilda Taba, "The Teaching of Thinking," Elementary English, Vol. XLII (May, 1965), pp. 534-542; Hilda Taba and Freeman F. Elzey, "Teaching Strategies and Thought Processes," Teachers College Record, Vol. LXV (March, 1964), pp. 524-534; Hilda Taba, Samuel Levine, and Freeman F. Elzey, Thinking in Elementary School Children; Verduin, Conceptual Models, pp. 16-26; LaGrone, Proposal, pp. 22-24; AACTE, Professional Teacher Education, pp. 37-38.

[69] Edward T. Hall, The Silent Language, especially pp. 57-81; LaGrone, Proposal, pp. 24-25; AACTE, Professional Teacher Education, p. 38.

Galloway considers the communicative nature of facial expressions, bodily activity, and vocal intonation. There is a need for agreement between the verbal and non-verbal messages being communicated by the teacher. Moreover, the teacher must recognize that the non-verbal messages are more communicative to some students. The non-verbal meanings help a student understand and validate the verbal meanings of the teacher.

Galloway envisions teacher non-verbal behavior falling into seven contiguous categories which form a continuum. The seven categories from most positive through neutral to most negative are:

1. enthusiastic support
2. helping
3. receptivity
4. pro forma
5. inattentive
6. unresponsive
7. disapproval.[70]

Assessment of the Social-Emotional Climate in the Classroom. Withall developed a seven-category scale of verbal behavior in order to measure the social and emotional climate in the classroom.[71] These seven categories are used to classify teacher statements which:

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[70] Chas. M. Galloway, "Nonverbal Communication in Teaching," Educational Leadership, Vol. XXIV (Oct., 1966), pp. 55-63; LaGrone, Proposal, pp. 24-25; AACTE, Professional Teacher Education, p. 38.

1. reassure or commend the student
2. accept or clarify student comments
3. ask questions
4. are neutral comments, formalities, or repetitions
5. give students directions
6. criticize students
7. justify teacher actions or authority.[72]

Withall found that the use of categories one and two indicates a student-centered classroom; category three a problem-centered classroom; and categories five, six, and seven a teacher-centered classroom. The use of category four has no influence upon the classroom.

It should be noted that Withall's study makes no distinction in regard to percent of time spent by the teacher using each category; categorization is by number of statements only. Withall categorizes only teacher statements; no provision is made for recording of student comments. This system does not classify content nor does it even need a classroom in which subject matter is being presented in order to be used; all situations in which the teacher is talking are equally useful.

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[71] John Withall, "The Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," Journal of Experimental Education, Vol. XVII (March, 1949), pp. 347-361; LaGrone, Proposal, pp. 25-26; AACTE, Professional Teacher Education, p. 39.

[72] Withall, "The Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," Journal of Experimental Education, Vol. XVII (March, 1949), p. 349.

A Study of the Classroom Group as a Social System. Getzels and Thelen have constructed a model of the classroom group as a social system that is influenced simultaneously by sociological factors and psychological factors. In addition, the sociological factors are tempered by anthropological factors and the psychological factors are tempered by biological factors.[73] Since the classroom is a social system, within the group there is a meeting of the institution (sociological) and the student-individual (psychological). The roles and expectations of the institution must be matched with the personalities and need-dispositions of the student-individuals. This alignment must be achieved largely through the skillful efforts of the teacher. The teacher creates the climate and intentions of the classroom group. The climate will determine whether or not the role as defined by the institution and the personality of the student-individual can accommodate one another in the classroom situation. In similar manner, the intentions of the classroom group may or may not allow for blending of institutional expectations and student needs.

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[73] Jacob W. Getzels and Herbert A. Thelen, "The Classroom Group as a Unique Social System," The Dynamics of Instructional Groups, Fifty-ninth Yearbook of the National Society for the Study of Education, Part II (1960), pp. 53-82; Verduin, Conceptual Models, pp. 55-66; LaGrone, Proposal, pp. 26-28; AACTE, Professional Teacher Education, pp. 40-41.

If a congruent situation between institution and student is achieved, then goals will be reached. This will allow the institution and, in a larger sense, the society (anthropological) to serve and be served by the student-individual as an organism (biological). Lack of congruency will mean that society and the organism do not serve one another, ending in alienation both in the classroom and in the larger society.

Nature of Leadership Style. It is the teacher who is given the task of leadership in the classroom. As the group leader, he is responsible for creating a conducive atmosphere for learning and for selecting activities through which learning can be achieved. He may or may not perform these responsibilities effectively.

Jenkins considers teacher leadership from the bases of authority, power, and influence.[74] By authority he is referring to the legal right that the teacher has been granted by the community. Power is the control a teacher has over students by virtue of his physical and mental superiority, assignment of letter grades, and social role in the classroom. Influence is the relative interchange of ideas and views between teacher and students. Jenkins' thesis is that the use (or misuse) of these three factors will significantly affect the leadership ability of the teacher.

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[74] David H. Jenkins, "Characteristics and Functions of Leadership in Instructional Groups," The Dynamics of Instructional Groups, Fifty-ninth Yearbook of the NSSE, Part II (1960), pp. 164-184; LaGrone, Proposal, pp. 28-29; AACTE, Professional Teacher Education, p. 42.

The teacher's use of his leadership responsibility is observable in the way he manipulates the physical, social, emotional, and psychological conditions within the classroom. He is responsible for accomplishing the societal expectations.

In order to perform his responsibilities acceptably, the teacher must understand children, himself, and group dynamics. The teacher must be able to channel his own abilities in such a way that he can manipulate the classroom group. The teacher must have the perception to tell if the classroom group is accomplishing the societal goals which have been set.

Structures and Uses of Knowledge--Course II

This course is intended to help the prospective teacher "analyze content, put elements of the knowledge in instructional form and assess certain logical operations performed in teaching the content."[75] Each of the units in this course presents a different model for viewing the structure or use of knowledge.

Determinants and Uses of Knowledge. Broudy, Smith, and Burnett distinguish between four types of learning: associative, replicative, interpretive, and applicative. Associative learnings refer to those learnings which are brought to mind by a cue. When something is elicited spontaneously because something else reminds us of it or resembles it, we can say associative learning is involved. For example, if a teacher mentions "fire engine," the student may think of "red," "Dalmatian," "water," "fire chief," and "alarm." It is important to note that while there may perchance be a logical connection between some associative ideas, as likely as not there is no such logical connection. Thus, "fire engine" has no logical connection with "red" or "Dalmatian," since fire engines could just as logically be blue or white and many fire houses have no mascot.

Replicative learnings are those facts and skills which we perform automatically or recall in rote fashion. These are the learnings we have learned so thoroughly, many through repetition or imitation, that we need not be told how or when to do them. Multiplication tables, the skill of writing, and the name of the discoverer of America are replicative learnings.

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[75] LaGrone, Proposal, p. 30; AACTE, Professional Teacher Education, p. 42.

Interpretive learnings are learnings which give perception, feeling, understanding, and interpretation to our lives. Groupings, systems, categories, and structures are included in this type of learning provided they are not memorized learnings. For example, considering the geographical, social, economic, political, as well as military factors in the Civil War will increase the interpretive learnings in United States history.

Applicative use of knowledge means that the knowledge which one has gained is used to solve new problems or to analyze a situation. An example of applicative learning is the homeowner trouble-shooting an electric clothes washer that will not work. It could be that the washer is broken down or it could be that the receptacle where it is plugged in is not receiving electric current. Knowing that a lamp will not light if the receptacle is "dead," the homeowner may narrow down his problem by plugging a lamp into the receptacle. If the lamp will light, when turned on, the problem is likely in the washer; if the lamp will not light, the problem is in the receptacle or before. Knowledge of electricity is applied to a new problem in this instance.[76]

Logical Structure. Knowledge occupies a logic-space that is multi-dimensional, according to the concepts of Hickey and Newton.[77] Thus, at any given instant, a person's thought processes can be pinpointed at a given place on both vertical and horizontal planes. Hickey and Newton's model of the logic space[78] designates two dimensions of knowledge. The first dimension (front-to-back) is from the elemental (back) to the complex (front). This dimension involves two types of reasoning: synthesis and analysis. Synthesis is the process of going from elemental to complex. Analysis is the process of going from complex to elemental.

The second dimension which Hickey and Newton have designated is the vertical dimension going from specific

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[76] Harry S. Broudy, B. Othanel Smith, and Joe R. Burnett, Democracy and Excellence in American Secondary Education: A Study in Curriculum Theory, Chapter III, pp. 43-60; LaGrone, Proposal, pp. 30-31; Verduin, Conceptual Models, pp. 67-75; AACTE, Professional Teacher Education, p. 43.

[77] Albert E. Hickey and John M. Newton, The Logical Basis of Teaching: I. The Effect of Subconcept Sequence on Learning; Verduin, Conceptual Models, pp. 76-84; LaGrone, Proposal, pp. 31-34; AACTE, Professional Teacher Education, pp. 43-46.

[78] Hickey and Newton, The Logical Basis of Teaching, p. 8.

(bottom) to general (top). This dimension involves two types of reasoning, also: induction and deduction. Induction is the process of going from the specific to the general while deduction is the process of going from the general to the specific.

During their research proceedings, Hickey and Newton reached the conclusion that while knowledge is multi-dimensional, learning can be achieved only in a one-dimensional sequence. Thus, the teacher must engage in only one of the processes of analysis, synthesis, induction, or deduction at a time. The teacher needs to make two decisions for each teaching situation, however. First of all, will he use the process of analysis, synthesis, induction, or deduction? The second decision relates to the level involved in the process. Thus, if analysis or synthesis is the process, shall the level be specific or concrete; and if induction or deduction is the process, shall the level be elemental or complex?

Structure and Form of Knowledge. In several recent writings,[79] Bruner has analyzed the structure of knowledge.

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[79] Jerome S. Bruner, The Process of Education, Chapter II; Jerome S. Bruner, Toward a Theory of Instruction, pp. 44-48; Jerome S. Bruner, "Some Theorems on Instruction Illustrated with Reference to Mathematics," Theories of Learning and Instruction, The Sixty-third Yearbook of the National Society for the Study of Education, Part I (1964), pp. 306-335 (especially pp. 309-313); Jerome S. Bruner,

He states that the structure of knowledge in any given situation is characterized by: its mode of representation, its economy, and its power.

Content can be represented in three modes. The first mode, enactive representation, refers to the actual object, motor skill, or event that a person experiences or a duplicate of the actual thing. The second mode, iconic representation, is composed of pictures, objects, diagrams, or models that depict the original in graphic form. The third mode, symbolic representation, consists of verbal explanation or description of the object, skill, or event, sometimes in the technical terms of a theory or formula.

Each discipline has its own "economy." This means that within the content itself there develops a kind of "shorthand" so that large quantities of items can be referred to by a single word, a short statement, a notation, or a formula. The particular methods or terms vary with the content areas, but this type of "economy" does exist in all content areas.

By the "power" of a given discipline, Bruner refers to the generative ability of the content. Thus, if content has been organized in a learnable fashion by the teacher,

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"The Course of Cognitive Growth," American Psychologist, Vol. XIX (Jan., 1964), pp. 1-15; LaGrone, Proposal, pp. 8-11, 34; AACTE, Professional Teacher Education, pp. 46-47.

it not only results in the students learning what the teacher had intended them to learn. In addition the interrelatedness of the content to other ideas causes learning of peripheral ideas to occur. This ability of a discipline to occasion spontaneous learning is due to the transfer of principles. Unless the structure of the content is taught by the teacher, the generative power of the content will be lost.

The Meaning of Subject Matter. "Subject matter" has been defined in the past as both concrete objects and content of traditional subjects; Henderson[80] proposes subject matter be considered as knowledge. This knowledge could be either cognitive ("knowing that") knowledge or non-cognitive ("knowing how") knowledge. Henderson believes such a concept of subject matter is needed since it is more sensible and useful for a teacher to speak of what students should know rather than what they should experience or study. Using the concept that subject matter is knowledge, the teacher is aided in selecting the subject matter, organizing the subject matter, and evaluating the students' learning of the subject matter. It is practical and logical to think of choosing, organizing, and testing knowledge, but not to think of selecting, organizing, and testing experiences or content, since concrete objects cannot be taught and conventional content is too prone to memorization.

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[80] Kenneth B. Henderson, "Uses of 'Subject Matter,'" Chapter III (pp. 43-58), in B. Othanel Smith and Robert H. Ennis (eds.), Language and Concepts in Education; LaGrone, Proposal, pp. 35-36; AACTE, Professional Teacher Education, pp. 47-48.

Since "knowing-how" knowledge is generally changed into statements of "knowing-that" knowledge when the teacher specifies what knowledge he wants the students to know, Henderson decides that all subject matter can be classified as "cognitive knowledge about a subject."[81] All cognitive knowledge can be classified as statements, prescriptions, or value statements. Statements are sentences about which it can be answered that they are "true" or "false." Statements may be subdivided into analytic and contingent statements. An analytic statement is one in which the predicate simply restates the subject; a contingent statement is one in which the predicate denotes a quality, fact, or attribute of the subject. Prescriptions are directions, orders, or commands. Since they do not state a truth unless they are changed from a prescription into a related generalization, prescriptions are only indirectly considered knowledge. Value statements place a judgment upon something. This judgment may be factual or opinion in orientation. They are related to prescriptions since a command is implied in many instances. Nevertheless, with both prescriptions and value statements, there is an intent to teach something that the teacher considers knowledge.

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[81] Henderson, "Uses of 'Subject Matter'" in Smith and Ennis (eds.), Language and Concepts in Education, p. 58.

Each of these three types of knowledge--statements, prescriptions, and value statements--may refer to a specific or to a generalization. By making this distinction, we know whether knowledge is about a singular object or about a class of things. We also know if proof will be subject to observation of a singular object or to observation of numerous instances.

Logical Aspects of Teaching.[82] The knowledge of a subject which teachers must have includes the "logic" and "psychology" of the subject in addition to the "content." Having a knowledge of a subject's logic and psychology is what enables the teacher to prepare and present content in a logical, coherent, and expeditious fashion to the students. The burgeoning of knowledge which has occurred at an ever-increasing rate requires that teaching be done in a different manner than it is at present; the need for teaching to be more coherent, interesting, and meaningful also requires different teaching. Rather than presenting each subject in a catalog-like, encyclopedic manner, in which every item is presented and described as a passive fact, we presently need to stress the method of inquiry so that the active aspects of the subject are utilized.

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[82] Smith and Meux, A Study of the Logic of Teaching; Smith, A Tentative Report on the Strategies of Teaching; William A. Jenkins (ed.), The Nature of Knowledge; LaGrone, Proposal, pp. 36-37; AACTE, Professional Teacher Education, pp. 48-49.

The logic of going from the concrete to the abstract, particular to general, axiomatic to hypothetical, and known to unknown must be understood and followed. Such logical procedures require a clear understanding on the teacher's part of the need for concept formation in teaching. The teacher needs to envision knowledge not as an accumulation of facts, but as the vehicle which will enable students to move forward on the avenue of improvement. If teaching follows the logical procedures which are alluded to in this topic, then the product being dispensed will be the tools for improvement which students need.[83]

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[83] The writer acknowledges indebtedness to all of the contributors to Jenkins (ed.), The Nature of Knowledge, as he, the writer, prepared for this and the following section. These contributors and their contributions are: J. Martin Klotsche, "The Need for Knowing," pp. 7-15; Earl S. Johnson, "Ways of Knowing," pp. 16-27; Arthur W. Foshay, "Knowledge and the Structure of the Disciplines," pp. 28-41; Arno A. Bellack, "Conceptions of Knowledge: Their Significance for the Curriculum," pp. 42-53; B. Othanel Smith, "Knowledge About Knowledge for Teachers," pp. 54-67; Paul R. Hanna, "Structure of Knowledge: The Interrelationship of Ideas," pp. 68-83; John I. Goodlad, "Knowledge, Pre-Collegiate Education and the Preparation of Teachers: Perspectives on the National Scene," pp. 84-93; and, William A. Jenkins, "Introduction," pp. 1-6 and "Summary," pp. 94-95.

Especial attention needs to be given to the logical character, both interpretation and use, of the several types of sentences which Smith has identified and explained in his work. Clarity and coherence of a lesson depends more upon the logic and psychology of content as expressed by the classroom teacher and the students than upon any other single factor. Smith emphasizes that a teacher need not make conscious use of the formal rules of logic in order to conform to the needs of good teaching; Smith does insist that a teacher must abide by logical procedures when teaching, however, so a knowledge of logic in regard to language usage is a must.[84]

Analysis of Content and Existing Structures.[85] Students need to learn content based upon the structure of knowledge peculiar to the given discipline. Jenkins states: "The structure of knowledge cannot be equated with ordering descriptions."[86] Rather than being based upon assemblages of facts in static categories, today's education must be based upon dynamic conceptions of content that are learned through utilizing the modes of inquiry and the modes of thought (logical, empirical, moral, and aesthetic) of the disciplines. In this way, the concepts of content will be learned through experiencing the content in its interrelationship with other concepts rather than content being memorized facts and classifications. Viewing the interrelationships of the various modes of thought will enable students to understand how our knowledge has evolved and how each mode of thought is valuable and productive in its own rite.

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[84] Smith and Meux, A Study of the Logic of Teaching; Smith, A Tentative Report on the Strategies of Teaching.

[85] Broudy, Smith, and Burnett, Democracy and Excellence in American Secondary Education, especially Chapters VIII and IX, pp. 121-138 and 139-156; Jenkins (ed.), The Nature of Knowledge; Asahel D. Woodruff, "The Nature and Elements of the Cognitive Approach to Instruction," unpublished paper (mimeographed), May 28, 1964; LaGrone, Proposal, pp. 37-38; AACTE, Professional Teacher Education, pp. 49-50.

[86] Jenkins, The Nature of Knowledge, p. 95.

The classroom teacher is confronted with the decision of what concepts will be taught. In addition, the teacher must decide how these concepts will be taught. The two decisions of what concepts and how to teach them must be made in accordance with the structure and logic of the discipline. As we prepare our content and learning activities in such a manner, we shall be giving students the kind of knowledge that serves them as a springboard for improvement. Concepts are not selected, then, because of ease in teaching but because of value to the learner. The structure of knowledge would place the following requirement upon the teacher in preparing concepts for presentation: the concepts which will be taught must be shown in interrelationships so that the structure of knowledge becomes clear to the students; those concepts which best illustrate the structure of the discipline should be taught; the methods of teaching a concept should first utilize the simpler logical procedures then progress to the more complex logical procedures later after the concept is clearly instilled in the student. A clear concept of concepts must be instilled in the mind of the education student so that he no longer views teaching simply as telling students about his subject.[87] As knowledge of a subject is considered as "logic," "psychology," "structure," and "concepts" in addition to "content," teaching should have a new significance to the education student.

Concepts of Human Development and Learning--Course III

The content in this course is intended to aid in an understanding of cognitive growth and mental processes.[88] Each of the topics in this course presents a different view about the structure or operations of the intellect.

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[87] AACTE, Professional Teacher Education, p. 22.

[88] LaGrone, "Toward a New Curriculum for Professional Teacher Development," Liberal Education, Vol. LI (March, 1965), p. 75; LaGrone, Proposal, p. 39; AACTE, Professional Teacher Education, p. 50.

Structure of Intellect. Based upon a three-dimensional model called "Structure of Intellect," with five, four, and six categories in these three dimensions, Guilford and his associates portray 120 combinations of intelligence.[89] The three dimensions are operations (or processes), contents, and products. Operations refers to the intellectual abilities or processes which are cognition, memory, convergent thinking, divergent thinking, and evaluation. Content is based upon the kind of material which is dealt with in the operations or intellectual processes. Content can be figural (concrete), symbolic (pictures, signs, and symbols), semantic (verbal), or behavioral (affective). Products categorizes the outcome into units, classes, relations, systems, transformations and implications.

Content and products are not ignored by the TEAM Project program, but operations are the real concern. For this reason, the writer wishes to pursue the meaning of the various operations more fully. Cognition is the process of comprehending and understanding information, whereas memory is the remembering and storing of information. The other three types of operations are based upon cognition and memory. Convergent thinking is the production of one item of information from a large body of material so that the desired answer is reached. Divergent thinking is the production of new information beginning with known information so that a large quantity of varied, unspecified answers is achieved. Evaluative thinking is the assessment of information to determine the value or truth of it.

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[89] J. P. Guilford, P. R. Merrifield, and Anna B. Cox, Creative Thinking in Children at the Junior High School Levels; J. P. Guilford, "The Structure of the Intellect," Psychological Bulletin, Vol. LIII (July, 1956), pp. 267-291; J. P. Guilford, "Three Faces of Intellect," The American Psychologist, Vol. VIII (Aug., 1959), pp. 469-479; Verduin, Conceptual Models, pp. 85-94; LaGrone, Proposal, pp. 39-41; AACTE, Professional Teacher Education, pp. 50-52.

While most tasks do not rely upon a single operation exclusively, there is a differing emphasis upon one operation or another. It is important to note that cognition, memory, and convergent thinking are the operations usually stressed in most school situations. The category of divergent thinking is the area which Guilford has researched intensively. He believes both divergent thinking and evaluative thinking need to be promoted more than we have since they are the two areas of thinking that are productive of new thought.

Cognitive Growth. In a previous topic, "Structure and Form of Knowledge,"[90] Bruner's description of the modes of representation of knowledge[91] was presented. These three modes--enactive, iconic, and symbolic--were discussed from the standpoint of content development in the earlier topic. Now, in this topic, these same modes will be viewed as they relate to student cognitive growth. Rather than emphasize the objects involved in learning--real objects, images, or words--the emphasis now is upon the process that the learner is involved in--activity, viewing, or verbalizing.

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[90] Supra, pp. 75-77.

In the _enactive_ mode, the student is not only involved with the real objects, he is engaged in an activity so that the knowledge is etched into his muscles, in a manner of speaking. The importance of this _enactive_ mode is that until a person has engaged in an activity, utilizing his bodily functions, he cannot form an appropriate image of the activity.

In the iconic mode of learning, which must have been preceded by an adequate _enactive_ process, the use of images in teaching and learning is appropriate, since images have been developed by the student through the

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[91] Bruner, _The Process of Education_, Chapter II; Bruner, _Toward a Theory of Instruction_, pp. 44-48; Bruner, "Some Theorems of Instruction Illustrated with Reference to Mathematics," _Theories of Learning and Instruction_, Sixty-third Yearbook of the NSSE, Part I (1964), pp. 306-335; Bruner, "The Course of Cognitive Growth," _American Psychologist_, Vol. XIX, No. 1 (Jan., 1964), pp. 1-15; LaGrone, _Proposal_, pp. 8-11, 34, 40, 42-43; AACTE, _Professional Teacher Education_, pp. 24, 46-47, 52-53.

enactive mode in which he has previously engaged. The use of various types of *iconic* representation in the teaching situation will help the student form a number of perceptions about the object, event, or activity which is being focused upon in the learning situation. By having more perceptions, the student will be able to form a larger number of and more accurate verbalizations about the object, event, or activity.

According to Bruner's analysis of cognitive growth, "doing" and "seeing" are not niceties in the curriculum which detract from verbalization, but they are necessary prerequisites to the *symbolic* mode. Seen in this frame of reference, education becomes an entirely different process from what occurs all too frequently. The *symbolic* mode in which the learner is using words to verbalize cannot be productive unless the *enactive* and *iconic* modes have given the student activities about which he has formed images that are subsequently subject to linguistic interpretation. Without common experiences and images, students cannot have similar interpretations. This means that the language pattern of the classroom in terms of the logical operations of verbal behavior cannot function properly since definitions, descriptions, and other logical operations are not being formed upon similar mental images.

In a parallel vein of thinking, Mooney portrays the student in a continual interaction with his total environment. Without the inclusion of activities and image formation, learning cannot occur.[92]

Concept Formation. In a previous section[93] Woodruff's "Cognitive Cycle" was presented and explained. In addition to an explanation of the cycle, several other ideas of Woodruff's need to be explained that have pertinence to the teaching-learning situation.[94]

The first of these is that teaching will be largely ineffective if we do not, as teachers, utilize experiences and media in teaching (Bruner's enactive and iconic modes from the previous section). Only as students are personally involved with real referents and media will they be able to form their own concepts rather than memorize the concepts of someone else. It appears that memorized concepts do not change behavior, thus the memorized concepts of many school situations are valueless. For this reason, Woodruff promotes concept formation by the students.

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[92] Ross L. Mooney, "Creation and Teaching," Bulletin of the Bureau of School Service, Vol. XXXV (1963), pp. 45-62, cited in LaGrone, Proposal, pp. 40-43 and AACTE, Professional Teacher Education, pp. 52-53.

[93] Supra, pp. 41-43.

[94] Asahel D. Woodruff, "The Use of Concepts in Teaching and Learning," The Journal of Teacher Education, Vol. XV (March, 1964), pp. 81-99; Asahel D. Woodruff, "The Nature and Elements of the Cognitive Approach to Instruction," unpublished paper (mimeographed), May 28, 1964; Verduin, Conceptual Models, pp. 102-107; LaGrone, Proposal, pp. 2-8, 11-14, 43; AACTE, Professional Teacher Education, pp. 17-24, 53-54.

A second idea is the role of the teacher in concept formation. The teacher is not to give the students ready-made concepts to be memorized. Rather the teacher should select the real referents and media for perceptual input, call attention to certain aspects of these referents and media portrayals, and guide the students toward the formation of meaningful concepts. Since much of the value in learning comes from creating a linguistic interpretation of the perceptions gained through the enactive and iconic processes, it is the teacher's task to guide students into a verbalizing of concepts. The teacher should avoid stating concepts, since concepts stated by the teacher will become memorized concepts which are of no value to the student. It is at this stage, then, that the ability of the teacher to question is highly important. The teacher must also be skilled in creating a desire to get students to choose to try out their concepts as well as being skilled in creating an opportunity to allow students to try out their concepts.

The third idea, which Woodruff documents heavily,[95] is that no learning other than conceptual learning makes any real difference in the life of the learner. We need to arrange our teaching in order that conceptual learning is facilitated.

The fourth idea is that the teacher must be able to understand his subject matter quite well in order to recognize the important elements of it. Rather than view every term, datum, and topic as necessary and important, the teacher must be selective. He must choose those topics which are most representative of his discipline and, at the same time, most pertinent to the students. The terms and data of the discipline which relate to the topic or concept being learned must be identified. The teacher then proceeds to organize the learning experience around the topic with those terms and data which are essential for the clear mastery of the topic.[96]

Cognitive Learning Styles. The studies of critical thinking, creativity, and divergent thinking have made their contributions in regard to teaching by calling for different kinds of learning than the typical memory and cognition learnings. Another important outcome of these studies has been the insight which the teaching profession has gained into the multitudinous combinations of individualized learning styles. While there are gross similarities of learning that are common to all people, Taba,[97] Getzels,[98] and Riessman[99] point out that each individual has a distinctly unique way of implementing the same general mental processes.

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[95] Woodruff, "The Use of Concepts in Teaching and Learning," The Journal of Teacher Education, Vol. XV (March, 1964), pp. 81-99 (especially pp. 84-86).

[96] LaGrone, Proposal, pp. 4-6; AACTE, Professional Teacher Education, pp. 20, 30-31.

Reissman points out that we have failed to understand and appreciate the individual differences in learning styles. We have overemphasized such things as mental blocks and distractions rather than considering the full import of such things as physical-verbal, fast-slow, pressure-relaxed, quiet-noisy, aural-oral differences in approaches to learning. Not only do we need to consider the differences so that each person can use his particular style to advantage, but we also need to help correct weaknesses through a program conducive to improvement.

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[97] Hilda Taba, Samuel Levine, Freeman F. Elzey, Thinking in Elementary School Children; Hilda Taba and Freeman F. Elzey, "Teaching Strategies and Thought Processes," Teachers College Record, Vol. LXV (March, 1964), pp. 524-534; Hilda Taba, "The Teaching of Thinking," Elementary English, May, 1965, pp. 534-542; Verduin, Conceptual Models, pp. 16-26; LaGrone, Proposal, pp. 44-45; AACTE, Professional Teacher Education, pp. 54-55.

[98] J. W. Getzels, "Creative Thinking, Problem Solving, and Instruction," Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I (1964), Chapter X, pp. 240-267; LaGrone, Proposal, pp. 44-45; AACTE, Professional Teacher Education, pp. 54-55.

[99] Frank Riessman, "The Strategy of Style," Teachers College Record, Vol. LXV (March, 1964), pp. 484-489; LaGrone, Proposal, pp. 44-45; AACTE, Professional Teacher Education, pp. 54-55.

Taba notes differences in the ability to incorporate new information. She distinguishes between "assimilation" and "accommodation" in learning:

> Of special relevance is the idea that thought matures through a progressive and active organization and reorganization of conceptual structures. The individual fits the information he receives at any moment into the conceptual scheme he already possesses. When the requirements of the situation do not fit his current scheme, however, the individual is forced to alter it or to extend it to accommodate new information. Piaget calls this fitting process "assimilation" and the process of alteration "accommodation."[100]

Taba believes that people need different lengths of time in the processes which Bruner calls enactive and iconic, and that differences exist in the time required for assimilation and accommodation.

Getzels notes the differences, both relative and absolute, among different types of thinking within individuals. He differentiates between problem-seeking and problem-solving abilities.

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[100] Hilda Taba and Freeman F. Elzey, "Teaching Strategies and Thought Processes," Teachers College Record, Vol. LXV (March, 1964), pp. 527-528.

The writings of these three individuals provide a starting point, then, for the exploration of individual differences in learning.

Inquiry Training. Suchman, in his research on inquiry training[101] uses a model very similar in basic design to Woodruff's "Cognitive Cycle."[102] Using the terms "intake," "storage," "motivation," and "action," Suchman develops an equivalent sequence to Woodruff's "input," "concept formation," "decision making," and "trial." There is an intentional focus by Suchman upon inquiry. He formulated some interesting classroom procedures as well as finding valuable implications for any learning situation.

The classroom procedures which Suchman used to stimulate inquiry were as follows. First, a silent motion picture of a physics demonstration was shown to a group of fifth grade children. Each film (40 in all) would create a problem situation for the students by showing an interesting phenomenon. An example is a varnish can which is heated, then corked, resulting in the collapse of the can. The problem presented to the class is "Why did the can collapse?" The class proceeds to formulate and ask questions of the teacher. The questions must be answerable by "yes" or "no." There are three categories of questions that they ask. The first series of questions must be about the objects, properties, conditions, and events of the film-happening so that what was observed is clarified. The second series of questions must be questions that serve to identify the variables that were necessary and instrumental in causing the problem situation to occur. The third group of questions are ones constructed to reach an explanation of the phenomenon that occurred. If a student asks a question that is not complete or restrictive enough for the teacher to answer "yes" or "no," the teacher may say "Tell me more." The main thing is that all inquiry must stem from the students, and in their questioning they must evidence insight into possible solutions since the teacher is limited to a "yes" or "no" response. After each inquiry session the teacher conducts a critique with the class in which their weaknesses in inquiry are discussed in order to aid them.

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[101] J. Richard Suchman, "Inquiry Training in the Elementary School," The Science Teacher, Vol. XXVII (Nov., 1960), pp. 42-47; J. Richard Suchman, The Elementary School Training Program in Scientific Inquiry (U.S. Office of Education Title VII Project No. 216), Urbana, Illinois: University of Illinois, January, 1964; J. Richard Suchman, Developing Inquiry; Verduin, Conceptual Models, pp. 95-101; LaGrone, Proposal, pp. 45-46; AACTE, Professional Teacher Education, p. 55.

[102] See discussion and footnotes, supra, pp. 41-43 and 88-90.

Suchman found that such procedures have a number of implications for teaching. First, students enjoy the learning situation when they play an active role. Second, the teacher becomes more skillful in recognizing how everyday experiences may illustrate the concepts he wants to teach, which variables are relevant, what the causal conditions of a situation are, and how to perfect the process of inquiry. Third, the students learned as much information and as many concepts of physics as the control group while doing significantly better on a test in skill in the inquiry process than the control group. Fourth, while the lecture can be a skillful tool in teaching, it is not the only "tool" that needs to be in the teacher's "tool box" and is a poor way to develop inquiry. Inquiry seems to develop best when the teacher becomes almost passive in the classroom, using didactics to help clarify inquiry procedures rather than in content-related situations.

Readiness and Motivation in Learning.[103] Two questions which educators have long pondered and still have not answered are "When are students capable of learning certain things?" and "How can I get students to desire to learn certain things?" While these two problems are not yet answered, this does not mean that there are no indications or tentative principles to guide our thinking. It is on the basis of providing guidelines that the TEAM Project program includes this topic.

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[103] Fred T. Tyler, "Issues Related to Readiness to Learn," Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I (1964), Chapter IX, pp. 210-239; Pauline S. Sears and Ernest R. Hilgard, "The Teacher's Role in the Motivation of the Learner," Theories of Learning and Instruction, Sixty-third Yearbook of the NSSE, Part I (1964), Chapter VIII, pp. 182-209; Jerome S. Bruner, "Some Theorems on Instruction Illustrated with Reference to Mathematics," Theories of Learning and Instruction, Sixty-third Yearbook of the NSSE, Part I (1964), Chapter XIII, pp. 306-335; Harry S. Broudy, B. Othanel Smith, and Joe R. Burnett, Democracy and Excellence in American Secondary Education, Chapter VI, pp. 91-105; LaGrone, Proposal, pp. 46-47; AACTE, Professional Teacher Education, pp. 55-56.

Tyler points out that there are two rather common views presently being held concerning readiness. The one view is that the person is always ready. The other view says that there is a fixed, immutable age for everything. Tyler proposes that we recognize readiness as being a complex, relative concept that is alterable. Thus, we must recognize our part as teachers to get students ready for certain learnings, since there must be a certain level of readiness on their parts, but this readiness is achieved through preparation. To an extent, Bruner's concept of modes of representation presents a concept of readiness. Bruner also points out that some learnings are predicated upon previous learnings. This indicates a type of readiness consistent with Tyler's views as well as that of Broudy, Smith, and Burnett. It is the contention of Broudy, Smith, and Burnett that the real question is not finding content appropriate to the child's readiness level, but finding methods and materials appropriate to teach the content at a given maturity level. They believe a child can be taught almost anything at any age level, but we need to decide how it should be taught. They point out as does Tyler that we face the problem of "ought" in addition to "can" a child be taught something. As a final point, it appears that there are many sequences into which subject matter can be ordered, but it must be systematic since readiness is dependent upon previous learning.

Assuming that readiness from the standpoint of maturity has been achieved, there is still the problem of motivation. Earlier learning theories were written for teacher-centered methods and verbal materials. They stressed extrinsic motivation using laboratory-psychology experiments as the means to determine how to motivate. The problem with such procedures, as Sears and Hilgard see it, is that curiosity, achievement, activity, and other positive motivational devices have been neglected. The newer approaches to teaching, such as the TEAM Project program incorporates, are more amenable to these positive, intrinsic,motivational devices. The verbal patterns, social-emotional climate, inquiry, leadership style, knowledge of cognitive growth, and other concepts that the teacher creates and utilizes all have impact upon classroom motivation.

Evaluation of Learning. LaGrone expresses the view that this topic has been quite well developed.[104] As a result, no sources are suggested for this topic. The recommendation is made that each particular institution select "the minimum essential concepts and skills required of the prospective teacher for effective evaluation" with particular attention being given to "the development of tests in cognition and processes in problem solving."[105]

Designs for Teaching-Learning--Course IV

This is an integrative course, bringing together the concepts of teaching behavior, structure of knowledge, and learning processes from Courses I, II, and III. The prospective teacher becomes involved in planning the teacher activities and selecting the content for a chosen type of cognitive learning so that behavior, knowledge, and process are seen as parts of a whole.[106] In addition to integrating, this course will refine and extend previously presented materials. Because of the events and experiences that have intervened, many materials will take on new meaning and significance. Rather than being viewed only as analytical tools, some concepts will now be viewed more in terms of implications for teaching.

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[104] LaGrone, Proposal, p. 47; AACTE, Professional Teacher Education, pp. 56-57.

[105] LaGrone, Proposal, p. 47; AACTE, Professional Teacher Education, pp. 56-57.

[106] LaGrone, Proposal, p. 48; AACTE, Professional Teacher Education, p. 57.

Teaching Strategies. Earlier in the program the works of Taba[107] and Smith[108] were surveyed. In the present topic these two studies are to be seen in terms of their relationship to one another.

By way of review, Taba[109] identified the following principles in her study:

1. Skillful teaching involves questions in a sequence, not as individual items.
2. Proper sequencing requires going from the simple to the complex in a series of small steps.
3. Proper sequencing eliminates random change from one mental process to another such as going from concept formation to interpretation of data or application of principles.
4. Sufficient time must be spent at each level to allow for adequate understanding before moving to the next level.

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[107] Supra, pp. 63-66.

[108] Supra, pp. 61-63.

[109] Hilda Taba, "The Teaching of Thinking," Elementary English, Vol. XLII (May, 1965), pp. 534-542; Hilda Taba and Freeman F. Elzey, "Teaching Strategies and Thought Processes," Teachers College Record, Vol. LXV (March, 1964), pp. 524-534; LaGrone, Proposal, pp. 22-24 and 48-49; Verduin, Conceptual Models, pp. 16-26; AACTE, Professional Teacher Education, pp. 37-38, 57-58.

> 5. Skillful teaching means that the teacher will identify and include all of the facts and concepts from a lower level of thought that are needed to go on to a higher level.

Smith's logical operations[110]--defining, describing, designating, stating, substituting, evaluating, opining, classifying, comparing and contrasting, conditional inferring, and explaining--have additional meaning in light of Taba's study. Some of the logical operations must precede others. The use of these logical operations in groups, in a series, and in a sequence is essential to good teaching. While a definite hierarchy of logical operations is probably not possible or wise, yet a tentative grouping into three levels may be appropriate. The simplest level of operations would seem to include defining, designating, and classifying. The intermediate level would be composed of describing, stating, reporting, and substituting. The complex level contains the operations of evaluating, opining, comparing and contrasting, conditional inferring, and explaining. The ambiguous nature of such grouping can be seen in the fact that the operation of designating can be used in an identifying or a labeling function. Nevertheless, an attempt to reach gross differences between operations can be a useful technique.

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[110] B. Othanel Smith and Milton O. Meux, A Study of the Logic of Teaching; Smith and Meux, "A Study of the Logic of Teaching," in Hyman (ed.), Teaching: Vantage Points for Study, pp. 101-117; Meux and Smith, "Logical Dimensions in Teaching Behavior," Chapter V, pp. 127-164 in Biddle and Ellena (eds.), Contemporary Research on Teacher Effectiveness; Smith, "A Concept of Teaching," Chapter VI, pp. 86-101 in Smith and Ennis (eds.), Language and Concepts in Education; Verduin, Conceptual Models, pp. 6-15; LaGrone, Proposal, pp. 21-22, 48-49; AACTE, Professional Teacher Education, pp. 37-38, 57-58.

Several similarites in findings can be seen in Taba and Smith's studies. These similarities are seen as points upon which the teacher of teachers should capitalize. The writer would suggest that the similarities of many of the other studies could wisely be mentioned. For instance, Suchman stresses the importance of involving the learner and of organizing the sequence of questions so that simple precedes complex; Bruner, Woodruff, and Suchman consider building images before verbalizing; and Sears and Hilgard discuss the importance of utilizing the intrinsic motivation in the learner and in subject matter. Additional similarities could be mentioned as the instructor sees fit or the prospective teachers discover them.

Several points are seen as especially important by LaGrone.[111] The teacher should have a clear conception of what he intends the students to learn or, more specifically, what behavioral changes he intends to bring about. What is being taught should be based upon sound learning principles. A recognition of the nature of knowledge should be involved. The readiness of the learners should be considered. And the teaching process should be seen as an interactive process.

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[111] LaGrone, Proposal, pp. 48-49; AACTE, Professional Teacher Education, pp. 57-58.

Learning Unit Design. All of the topics in Courses II and III made particular contributions to the prospective teacher's views of either content or learning processes. In addition, the use of multimedia throughout the program should have promoted new views of materials. This topic achieves a unification of the concepts about content, learning processes, and materials within a new framework. This new framework is a design for learning units as described by Woodruff.[112]

If the students will be learning factual subject matter, the content is composed of verbal knowledge. The materials with which to teach this verbal knowledge are terminology, data, and other verbal materials. These materials are learned through a process of memorization. A second type of learning is that of manipulative or motor skills. These learnings occur through practice situations of the overt acts. Some learnings, such as multiplication tables, alphabet formation, and location of typewriter keys must be memorized. Other learnings, such as dribbling a basketball, using a typwriter, and script writing must be learned through practice of overt actions.

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[112] Asahel D. Woodruff, "The Nature and Elements of the Cognitive Approach to Education," unpublished paper (mimeographed), May 28, 1964; Verduin, Conceptual Models, pp. 108-114; Woodruff, "Characteristics of an Effective Instructional Unit," unpublished paper (mimeographed), April 14, 1966; LaGrone, Proposal, pp. 11-14, 43, 49-50; AACTE, Professional Teacher Education, pp. 17-24, 53-54, 58.

When conceptual learning is desired, students will be forming concepts of process, behavior, or events; concepts of object, relationship, or structure; or qualities of an object, relationship, structure, behavior, process, or event. The materials with which to teach concepts are real referents, media which portray real referents, past acquired perceptions, and tryout situations or simulations. The learning processes are those of perception, restructuring and thinking, decision making, and trial. Much of what is presently memorized should be conceptualized. The teacher is safe in assuming that if a given learning does not need to be memorized or practiced, then it should be conceptualized. What is more, only a very small fraction of what we learn needs to be learned through memorization.

Since conceptual learning cannot be based upon verbal knowledge that is memorized or practiced, but requires perceptual input (sensory intake) of real referents or media, then a different design for learning units is required. The basis for a learning unit in which conceptual learning is to occur stems directly from the idea of concept formation which was presented in the Rationale[113] and in the topic in Course III entitled "Concept Formation."[114] The teacher who will be using conceptual learning in his classes must decide first what concept(s) he wishes to teach. Next, he needs to decide how this concept can be portrayed through real referents or media unless enough previous input already exists. The teacher must identify the objects, qualities, measurements, processes, and other related data that are pertinent to the concept. He must know these items in order to guide the students in the formation of concepts. In addition to deciding upon a means for portrayal and identifying the salient items, the teacher has the additional responsibility of selecting a trial situation. This trial situation should be a meaningful and realistic situation in which the student experiences both the value and the meaning which the concept has for him in everyday life.

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[113] Supra, pp. 41-43.

[114] Supra, pp. 88-90.

Formation of Objectives. Using the Taxonomy[115] and Mager's book[116] on objectives as references, this topic attempts to provide still further integration.[117] The teacher needs to be specific about what he intends to accomplish in the classroom; he should view each objective in light of a larger perspective; and, he must have a framework into which all of his objectives will fit. It is to these problems that this topic is directed.

The ability to formulate objectives that bring together the start and finish of a unit is one way of providing direction and continuity. If a teacher creates behavioral objectives, he will be wording his objectives in such a way that what he plans to teach is already in evaluative form. The fundamental requirements of a behavioral objective are that it describe what the student will be able to do after the learning unit is completed. This implies that the evaluation is doing the specified activity (or activities). Since the objective states the evaluation requirements, it simply remains for the teacher to identify all of the components of the specified activity and proceed to teach it. Since the objective states what the student will learn, it is easier for the teacher to decide if the anticipated learning is worthwhile, relevant, interesting, possible, and reasonable in terms of the learner, materials available, the teacher, and the situation.

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[115] Benjamin S. Bloom (ed.), Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I: Cognitive Domain.

[116] Robert F. Mager, Preparing Instructional Objectives.

[117] In addition to Bloom and Mager, the writer used the following as references for this section: David R. Krathwohl, "Stating Objectives Appropriately for Program, for Curriculum, and for Instructional Materials Development," The Journal of Teacher Education, Vol. XVI (March, 1965), pp. 83-92; Krathwohl, Bloom, and Bertram B. Masia, Taxonomy of Educational Objectives: The Classification of Educational Objectives. Handbook II: Affective Domain; C. M. Lindvall (ed.), Defining Educational Objectives; Robert M. Gagne, "The Analysis of Instructional Objectives for the Design of Instruction," Chapter II, pp. 21-65 in Robert Glaser (ed.), Teaching Machines and Programmed Learning, II: Data and Directions; Verduin, Conceptual Models, pp. 115-123; LaGrone, Proposal, pp. 50-51; AACTE, Professional Teacher Education, pp. 58-59.

The Taxonomy (both cognitive and affective domains) provides a means whereby the teacher can envision the objective for a given unit in a larger perspective. Since the Taxonomy provides a hierarchical arrangement of educational objectives, the teacher can decide if the level is an appropriate one for the specific situation. Through regular use of the Taxonomy, the teacher can create an appropriate course design that utilizes all levels of the Taxonomy in an appropriate balance. By seeing each objective in relation to one another and to the Taxonomy, a larger perspective and a framework are achieved.

The connection of objectives and evaluation is achieved in this topic. In addition, a relation to the topics of "Teaching Strategies" and "Learning Unit Design" should be easily observed and needs to be made. A total design for teaching-learning should be becoming obvious for the prospective teacher by the conclusion of this topic.

Instructional Systems.[118] Rather than view teaching as a day-to-day approach with a segmentalized group of methods being used to present bits of facts, teachers need to view each part of a class as being a portion of a whole. Each filmstrip, discussion, film, tape, or report is part of a system. Prospective teachers need to comprehend the depth of meaning involved in the statement: "An instructional system is the integration of the demands of communication, learning and content."[119] With such a view of teaching, educational technology is not simply "equipment" but becomes part of the science of instruction.

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[118] A. A. Lumsdaine, "Educational Technology, Programed Learning, and Instructional Science," Chapter XVI, pp. 371-401 (especially pp. 371-382, 392-401), *Theories of Learning and Instruction*, Sixty-third Yearbook of the National Society for the Study of Education, Part I (1964); Fred Harcleroad, "Theoretical Formulations in Audiovisual Communication," *Review of Educational Research*, Vol. XXXII (April, 1962), pp. 119-126; LaGrone, *Proposal*, p. 51; AACTE, *Professional Teacher Education*, pp. 59-60.

[119] LaGrone, *Proposal*, p. 11.

Technology does not replace instruction even with this view, but assumes a different perspective as an aid: rather than aiding only in the presentation, the theory involved in educational technology can aid in the preparation, also. Above all is the concept that teaching is assuming a more unlimited stance.

Instead of being limited to one method of presentation--the spoken word of the teacher--there are now many methods that can present what we wish to present. The teacher's task, partly, is to select which out of several methods will best fulfill the requirement. Whereas teaching was formerly viewed as occurring in a certain size of room with one teacher and twenty-five to thirty-five students, now the teacher must decide if individual study (perhaps with audio-visual materials), small-group study, or large-group work will best facilitate the needs.

Newer media are having a decided effect upon the range of possibilities now open to the teacher. Rather than being dependent upon a high degree of technical skill, many of the newer media can be operated by anyone having enough skill to use a coin-operated soda-pop dispensing machine. Thus, film-loop projectors, magnetic tape players, continuous film-strip projectors, and programed teaching machines can be available for indiviual use rather than group work only. All of these newer media supplement learning along with one of the first educational media, books. The teacher must achieve an integration of all of these media, as they can best serve the needs of the class, in a unified *system* of instruction.

Programed Instruction.[120] Programed instruction is an example of a teaching device that is valuable to education not only as a teaching aid, but also as a resource in the development and understanding of instructional theory. Programed learning stresses active participation of the student. It gives frequent responses and reinforces student learning. Progression is accomplished at an individual rate. Refinement of the program can take place because of the "feedback" which programers receive from student responses. The content which is prepared into program form illustrates the concept that each discipline is made up of a number of concepts which can be subdivided into a number of facts, principles, and processes.

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[120] Susan Meyer Markle, Lewis D. Eigen, and P. Kenneth Komoski, *A Programed Primer on Programing*; Robert M. Gagne, "The Analysis of Instructional Objectives for the Design of Instruction," Chapter II, pp. 21-65 in Robert Glaser (ed.), *Teaching Machines and Programed Learning, II: Data and Directions*; A. A. Lumsdaine, "Educational Technology, Programed Learning, and Instructional Science," Chapter XVI, pp. 371-401 (especially pp. 382-401), in *Theories of Learning and Instruction*, Sixty-third Yearbook of the National Society for the Study of Education, Part I (1964); LaGrone, Proposal, p. 52; AACTE, *Professional Teacher Education*, p. 60.

The prospective teacher who understands the basics of programing and who can create a program that is basically sound for a segment of content in his major subject area will have a knowledge of the integration of content, process, and behavior which will be usable not only for programing but also for classroom teaching. There are similarities between programing and teaching. These similarities include such things as the idea that content needs to be seen by the programer and the teacher in both a wholistic view and a fragmentary view with these two views having an ultimate relationship. The principles of reinforcement, immediate response, active participation of the learner, cueing, fading, and feedback are useful to both the programer and the teacher. The need for communicating well, asking appropriate questions, meeting the learner on his level, and being a positive influence is true for both programer and teacher. The integration of many ideas from previous topics can be achieved through learning the basics of programing.

Demonstration and Evaluation of Teaching Competencies--Course V

Course V is, like Course IV, an integrative course since it utilizes the learnings of the first three courses. Whereas the fourth course was a conscious attempt to tell how integration is achieved, however, this fifth course focuses upon the prospective teacher as he *engages* in various trial situations. The emphasis is upon *showing* integration rather than *discussing* it. In addition to demonstrating competencies, the prospective teacher should be able to evaluate his performance and rethink his original strategy. A topic on the construction of instructional theories followed by a topic on professionalism complete this area.[121]

A Review of Teacher Behaviors. There are certain dangers inherent in categorizing. For one thing, grouping tends to minimize the dynamic quality of the individual item, since the focus is not upon the item but upon the category. Were it not for the items, the category would have no value. But by focusing upon the category, the components have lost some of their worth. Thus, the whole becomes less than the sum of the parts unless each part has enough meaning to the individual that by being viewed together the parts gain worth from one another.

Grouping by similar function rather than grouping by inter-relation of activity results in leaving out the interaction of the three elements of behavior, content, and process. The dynamic interaction of these elements should be the central element in teacher education. The ability to perceive this dynamic interaction and to understand what is being perceived is one of the paramount goals of the professional component. Categorizing does not focus upon this system of interaction.

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[121] LaGrone, "Toward a New Curriculum for Professional Teacher Development," *Liberal Education*, Vol. LI (March, 1965), p. 76; LaGrone, *Proposal*, p. 53; AACTE, *Professional Teacher Education*, pp. 60-61.

By having a review of all of the teaching behaviors which have previously been seen in a dynamic situation, the student becomes mindful of the similarites. Moreover, by being reminded of some items which he might find useful in creating a teaching situation, he might become more aware of their potential. Therefore, his needs of the moment are to see the totality of items so that his range of selection is broadened.

Any number of ways to categorize or review could be used, but one way is to categorize behaviors according to teaching activities. Pedagogical moves, learning processes, information processing, influence, control, affectivity, response, communicativity, out-of-class instructional-related, personal characteristics and out-of-class non-instructional but school related. Other categories could be devised. As other topics are added, additional items will be added to the existing categories. The basic purpose of this topic will remain the same, however. This purpose is to review the numerous items of behavior that a prospective teacher could use in planning a given teaching situation.[122]

Selecting and Planning Trial Experiences. After reviewing the teaching behaviors which were included in the topics in the first four courses, the prospective teacher needs to plan trial experiences based upon a conscious selection of behaviors that he intends to demonstrate. The emphasis is upon a conscious selection. This requires the application of knowledge by the prospective teacher if selecting and planning are properly done. While the prospective teacher is not limited to a single way of doing things, there are going to be a limited number of combinations for each situation which are plausible. A high degree of perception and creativity can be achieved, however, within such limitations as do exist. The various teacher behaviors that are planned are to be demonstrated through such means as simulation or specific direct classroom experiences. Regardless of the means through which the trial experience is enacted, a recording needs to be made so that the trial experience may be evaluated.

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[122] LaGrone, Proposal, pp. 53-56; AACTE, Professional Teacher Education, pp. 61-63. No suggested sources are listed for this topic.

The time and number of experiences required will vary from one prospective teacher to another. The important factor is that he demonstrate competence in selected and varied behaviors. In order to have an adequate range of situations, it will likely mean that instead of being assigned to a given student teaching situation, the prospective teacher will work in a number of varied situations, some of which will be simulated. Once again, the stress will be upon competence of performance in prescribed behaviors rather than meeting a time or numbers requirement.

The conscious selecting and planning on the part of the prospective teacher and the teacher education staff of situation, behaviors, content, and process, with competency rather than time being the controlling factor, is the emphasis in this topic. It is hoped that this will result in a greater integration of theory and practice and in an intellectualizing of the teaching process rather than letting chance be the greatest factor. A product that is superior to existing products is envisioned and desired.[123] This topic would not be complete without the following topic, however.

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[123] LaGrone, Proposal, pp. 36-37; AACTE, Professional Teacher Education, pp. 63-64. No suggested sources are listed for this topic.

Analysis of Demonstrated Competencies. In actuality, this topic is a part of the preceding topic. It has been listed and described separately so that it might receive greater emphasis.

Since the trial experience is to be recorded, the prospective teacher will be able to see and hear his own performance. This recorded performance should be analyzed by means of the various analytic techniques of previous topics. The analysis which the prospective teacher obtains is then used as "feedback" for the selecting, planning, and presenting of following trial experiences. By being an active participant in the evaluative experience the prospective teacher is more highly benefitted.[124]

Theories of Instruction and Teaching. Ryans and Maccia have been engaged in studies which will give insight into the "how" and the "why" of constructing theories of instruction and teaching.[125] The construction of theory models and theories involves the prospective teacher in the iconic and symbolic representations of the teaching situations.

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[124] LaGrone, Proposal, p. 57; AACTE, Professional Teacher Education, p. 64. No suggested sources are listed for this topic.

[125] David G. Ryans, "A Model of Instruction Based on Information System Concepts," pp. 36-61 in James B. Macdonald and Robert R. Leeper (eds.), Theories of Instruction; David G. Ryans, "Teacher Behavior Theory and Research: Implications for Teacher Education," The Journal of Teacher Education, Vol. XIV (Sept., 1963), pp. 274-293; Elizabeth Steiner Maccia, "Instruction as Influence Toward Rule-Governed Behavior," pp. 88-99 in James B. Macdonald and Robert R. Leeper (eds.), Theories of Instruction; Elizabeth Steiner Maccia, George S. Maccia, and Robert E. Jewett,

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A theory is considered as a verifiable statement. Verification can occur through reason or observation. For purposes of instructional theory, however, verification will occur through observation since the theory is about an observable process. The observation need not be direct observation; the theorizer may utilize the observations of other persons for verification providing he is sure the observations were of the particular situation about which he is theorizing.

Involvement in theory construction will result in greater insight into the teaching situation. By construction of theories and theory models, the prospective teacher must form concepts about the teaching situation, in total or in part. The inquiry preceding the formulation of the theory in order to create it and following the formulation in order to verify it are desirable pursuits. Moreover, the interaction among several prospective teachers as they describe, verify, and modify each

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Construction of Educational Theory Models (U.S. Office of Education, Cooperative Research Project No. 1632), The Ohio State University; Verduin, Conceptual Models, pp. 124-137; LaGrone, Proposal, pp. 57-58; AACTE, Professional Teacher Education, p. 64.

other's theories is a valuable experience because of the insights, analytic abilities, and inter-personal behaviors which they are developing and utilizing. A pattern of analysis which will provide for continuing growth is being occasioned through this particular topic and its related experiences.

The Professional. The culminating topic is one in which there is no ending, only a beginning, during the undergraduate professional component. This topic serves as the gateway to the future for the prospective teacher.[126]

Studies Related to the Usage of the TEAM Project Content

The TEAM Project curriculum utilizes many writings and research studies from the field of education. These writings and studies were not undertaken for the TEAM Project, but were merely adapted by the TEAM Project staff. Many of these writings and studies were being used in teacher education programs before the TEAM Project was created. One of the main things that makes the TEAM Project unique is the bringing together of all of the various studies which it includes. The writer discovered two studies which measured the usage of certain portions of of the content included in the TEAM Project: Johnson's study[127] of student teaching programs and the AACTE study[128] of the TEAM Project workshops.

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[126] LaGrone, Proposal, p. 58; AACTE, Professional Teacher Education, p. 65. No suggested sources are listed for this topic.

Johnson's study "consisted of a survey of the current practices of student teaching programs in the United States. The main objective of the study was to clarify the current student teaching picture in the United States."[129] One question from Johnson's questionnaire asked if micro-teaching and simulation were being used before and during student teaching and if Flander's interaction analysis techniques, Taba's teaching strategies materials, and Bloom's Taxonomy of Educational Objectives were being used during student teaching.[130] The participants could respond to one of five answers: "Not at all," "A small amount," "A good deal," "Extensively," or "Don't know."

Johnson sent questionnaires to 1179 institutions in the United States and her territories. Out of this number, sixty-nine indicated that they had no student teaching program. From the remaining 1110 institutions, there were 870 institutions from which data was obtained for a 79 per cent return.[131] The responses are shown in Table 1. From this table, it can be assumed that only about one-third of the teacher education institutions use simulation to any extent (those who responded "A good deal" or "Extensively"), one-sixth use micro-teaching and the *Taxonomy*, one-tenth use interaction analysis, and one-twentieth use Taba's teaching strategies. About 71 per cent indicated they use simulation at all, 44 per cent use micro-teaching, 41 per cent use the *Taxonomy*, 36 per cent use Flander's interaction analysis system, and 18 per cent use Taba's teaching strategies.

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[127] James A. Johnson, A National Survey of Student Teaching Programs.

[128] AACTE, Professional Teacher Education II.

[129] Johnson, A National Survey of Student Teaching Programs, p. 1.

[130] Ibid., p. 96.

In the final report of the media component of the TEAM Project, the AACTE published the results of a survey concerning the AACTE Workshops held during the fall of 1967. There were 560 participants at these fifteen workshops held across the country. A total of 420 responses (75 per cent return) were returned. At the workshops, the uses of micro-teaching, simulation, interaction analysis and non-verbal behavior were presented. The AACTE survey asked about the past, present (December, 1967), and future use of the four innovative techniques. The percentages of

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[131] *Ibid*., p. 2.

TABLE 1.

A SUMMARY OF JOHNSON'S FINDINGS

Innovation	Use by Percentage				
	Not at all	A small amount	A good deal	Extensively	Don't know
micro-teaching	47	28	12	4	1
simulation	22	35	28	8	1
Flanders' interaction analysis	52	26	8	2	4
Taba's teaching strategies	66	13	4	1	1
Bloom's *Taxonomy of Educational Objectives*	45	25	13	3	5

(Based upon material from Johnson, *A National Survey of Student Teaching Programs*, pp. 53-59. Johnson was concerned with the use of innovations prior to and during student teaching in part of his survey.)

respondents who said they had used the innovations prior to the workshops were: micro-teaching, 24 per cent; interaction analysis, 35 per cent; nonverbal behavior, 20 per cent; and, simulation, 21 per cent. After the workshops, these percentages changed to: micro-teaching, 41 per cent; interaction analysis, 52 per cent; nonverbal behavior, 38 per cent; and, simulation, 33 per cent.[132]

The differences in percentages between these two studies--Johnson's and the AACTE's--can be attributed to several factors: institutions are focused upon in one study whereas individuals are focused upon in the other; the TEAM Project workshops helped disseminate material so that the AACTE responses, which were obtained in December, 1967, would indicate quite different findings from Johnson's study, which was conducted early in 1968; Johnson's study dealt more exclusively with the student teaching program, while the AACTE surveyed instructors from many parts of the professional component. There are large differences in the percentages of past and present usages of the AACTE survey and Johnson's findings; for interaction analysis, these figures (past, present, and Johnson's) were 35 per cent, 52 per cent, and 36 per cent; equivalent figures for micro-teaching were 24 per cent,

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[132] AACTE, Professional Teacher Education II, pp. 16-17, 89.

41 per cent, and 44 per cent; for simulation, these were 21 per cent, 33 per cent, and 71 per cent.

These discrepancies are to be expected. Interaction analysis could be taught in many education classes, hence the higher percentage for AACTE findings than for Johnson's study. Microteaching and simulation would be more appropriately used in practice and seminar situations, with student teaching being the prime example of such a situation. Quite expectedly, then, Johnson's study shows higher percentages for microteaching and simulation than the AACTE study shows.

Chapter three presents the procedures used in this study. The questionnaire used to conduct the survey was described first. The statistical measures utilized in organizing the data from the survey composes the second section of the chapter. The third portion of the chapter explains how the population used for this study was selected. The fourth and final section of chapter three describes the analytic procedures utilized in performing internal and external criticism upon the curriculum component of the TEAM Project.

CHAPTER III

PROCEDURES

The purpose of this chapter is to describe the procedures which were used in this study. The first section of the chapter describes the questionnaire which was used by the study and such related procedures as the cover letter and mailing. The second section presents both the methods and rationale of the statistical measures which were used. The third section explains how the population for this study was selected. The fourth and final section discusses the analytic framework which the writer followed in evaluating the curriculum component of the TEAM Project.

Questionnaire

The writer had a number of items of information which he wished to gather by means of a questionnaire[1] concerning the curriculum component of the TEAM Project. Since Professional Teacher Education had not been published before the writer conducted his study, the only publication which presented the curriculum component was LaGrone's *Proposal*. The question which was first on the questionnaire was:

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[1] See Appendix A, pp. 317 - 322, for a copy of the pilot study questionnaire, Appendix B, pp. 323- 328, for a copy of the revised questionnaire.

> 1. ARE YOU ACQUAINTED WITH HERBERT F. LaGRONE'S *A PROPOSAL FOR THE REVISION OF THE PRE-SERVICE PROFESSIONAL COMPONENT OF A PROGRAM OF TEACHER EDUCATION*?

By means of this question, the writer intended to find out how many respondents knew of the efforts of the Teacher Education and Media Project to construct a new curriculum for the professional component of teacher education.

Knowing is not *using*, however. In addition to deciding if AACTE member institution representatives know of the TEAM Project curriculum outline, the writer considered it useful to determine if any of the TEAM Project publications or TEAM Project workshops had created a change in the teacher education program at the AACTE member institutions. In order to sample the influence of the TEAM Project, the second question was:

> 2. HAVE THE *TEAM* PROJECT MATERIALS (*Proposal*, *Conceptual Models*) OR WORKSHOPS INFLUENCED THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION IN ANY WAY?

Through comparison of questions #1 and #2, it is further possible to determine which institutions do not know of the program for the professional component, but have nevertheless been influenced by TEAM Project materials or workshops.

After the first two exploratory questions, the writer determined that a series of in-depth questions were needed. Four aspects of the TEAM Project were identified: the rationale, the organization of course work, the content in the program, and the commitment to multimedia. There seemed to be four facets to each of these four aspects that were pertinent: a concrete value, a relative value, the influence of the TEAM Project, and the utilization of the TEAM Project. Focusing upon each of the four facets of all four aspects required a total of sixteen questions to provide answers to the questions desired. These sixteen questions were as follows:

3. DO YOU THINK WOODRUFF'S CYBERNETIC MODEL AND ITS IMPLICATIONS PROVIDE A VALID RATIONALE FOR TEACHER EDUCATION?

4. IN GENERAL, HOW DO YOU THINK THE TEAM PROJECT RATIONALE COMPARES WITH THE RATIONALE FOR TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

5. HAS THE TEAM PROJECT RATIONALE HAD AN INFLUENCE UPON THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION?

6. DO YOU USE THE TEAM PROJECT RATIONALE FOR THE RATIONALE OF TEACHER EDUCATION AT YOUR INSTITUTION?

7. DO YOU THINK THE ORGANIZATION OF COURSE WORK AS PRESENTED IN THE PROPOSAL IS SUITABLE FOR A PROGRAM OF TEACHER EDUCATION?

8. IN GENERAL, HOW DO YOU THINK THE ORGANIZATION OF COURSE WORK IN THE PROPOSAL COMPARES WITH THE ORGANIZATION OF COURSE WORK IN TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

9. HAS THE ORGANIZATION OF COURSE WORK IN THE PROPOSAL INFLUENCED THE ORGANIZATION OF COURSE WORK IN YOUR INSTITUTION?

10. DO YOU USE THE COURSE WORK ORGANIZATION AS PRESENTED IN THE PROPOSAL?

11. DO YOU THINK THE CONTENT REFERRED TO IN THE VARIOUS SECTIONS OF THE PROPOSAL IS VALID CONTENT FOR A PROGRAM OF TEACHER EDUCATION?

12. IN GENERAL, HOW DO YOU THINK THE CONTENT REFERRED TO IN THE PROPOSAL COMPARES WITH THE CONTENT IN TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

13. DO YOU USE THE CONTENT REFERRED TO IN THE PROPOSAL IN THE PROGRAM OF TEACHER EDUCATION AT YOUR INSTITUTION?

14. IF YOU USE ALL OR SOME OF THE CONTENT, HAVE YOU INCLUDED THIS CONTENT BECAUSE OF THE INFLUENCE OF THE TEAM PROJECT MATERIALS OR WORKSHOPS?

15. DO YOU THINK THE MULTIMEDIA APPROACH TO INSTRUCTION IS AN IMPROVEMENT OVER EXISTING METHODS OF INSTRUCTION?

16. DO YOU THINK THE TEAM PROJECT MATERIALS EFFECTIVELY LEND THEMSELVES TO THE UTILIZATION OF THE MULTIMEDIA APPROACH?

17. DO YOU USE A MULTIMEDIA APPROACH IN THE INSTRUCTION OF EDUCATION COURSES AT YOUR INSTITUTION?

18. IF YOUR ANSWER TO QUESTION #17 IS "YES," HAVE YOU BEGUN USING MULTIMEDIA INSTRUCTION BECAUSE OF THE INFLUENCE OF THE TEAM PROJECT?

Through these sixteen questions, a rather specific concensus was possible; opinions could be gained about the four facets and the four aspects in various combinations. It was hoped that the weakness and strength of individual aspects--rationale, organization, content, and multimedia commitment--would appear through this series of questions.

Closely related in purpose to the group of sixteen questions was question #21. The content in the TEAM Project program was composed of thirty-three topics. These thirty-three topics seemed to warrant individual ratings concerning the evaluation and the utilization by representatives from AACTE member institutions. As it finally appeared after many restatings, question #21 was:

> 21. IF YOU THINK THAT THE CONTENT REFERRED TO BY THE SECTIONS NAMED BELOW IS OF SUFFICIENT VALUE THAT YOU GIVE IT "TOP PRIORITY" FOR INCLUSION IN THE UNDERGRADUATE PHASE OF TEACHER EDUCATION, PLACE AN "X" IN COLUMN "A" OF THE FOLLOWING CHART. IF YOU USE THIS MATERIAL IN THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION, PLACE AN "X" IN COLUMN "B". PERSONS OR TECHNIQUES ASSOCIATED WITH THE CONTENT IN THE VARIOUS SECTIONS ARE NOTED WITHIN PARENTHESES. (Based upon the booklet prepared by Herbert F. LaGrone, A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education, Washington, D.C.: The American Association of Colleges for Teacher Education, 1964.)

This question rounded out the specific questions concerning certain phases and facets of the TEAM Project.

Question #21 would help identify topics which representatives believed unnecessary or weak as well as those that are quite desirable and potent. There seemed to be need for a question which would suggest additional topics for inclusion. Out of recognition for this need, question #22 arose. It was:

> 22. WHAT ADDITIONAL TOPICS OR CONCEPTS DO YOU BELIEVE TO BE NECESSARY FOR A PROGRAM OF TEACHER EDUCATION THAT THE TEAM PROJECT DOES NOT CONTAIN?

The writer recognized when adding this question that some suggestions may not be considered worthwhile by other people in the field. He also recognized that some topics which could be agreed upon by a large number of education professors would not be suggested. The inclusion of this question would at least create the possibility of suggestions which might be agreed upon and which should be considered.

The writer felt that in addition to knowing whether the TEAM Project program was or was not being accepted and utilized, it was desirable to find out what AACTE member-institution representatives consider the TEAM Project's advantages and disadvantages. In accordance with this conviction, questions #19 and #20 were included. These two questions asked:

> 19. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR DRAWBACK(S) OF THE TEAM PROJECT PROPOSAL?
>
> 20. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR ADVANTAGE(S) OF THE TEAM PROJECT PROPOSAL?

These two questions broke up the sequence of thought that the writer achieved in questions #3 through #18 and #21 plus #22; the length and detail of question #21 seemed to be such that the writer believed many respondents would ignore questions #19 and #20 if they followed question #21. Question #22 needed to follow question #21 regardless of the placement of questions #19 and #20. The writer believed questions #19 and #20 offered greater potential than questions #21 and #22. Placing a higher regard upon potential value than logical sequence, the writer decided to interject questions #19 and #20 before questions #21 and #22.

The identification of materials which would help present the topics included in the TEAM Project program prompted the writing of question #23:

> 23. IF YOU USE (OR WILL USE) COMMERCIALLY AVAILABLE MATERIALS RELATED TO THE TEAM PROJECT (SUCH AS TEXTBOOKS, A-V AIDS, ETC.) WHAT ARE THESE MATERIALS?

The production and publication of materials, whether textbooks or audio-visual aids, were of necessity handicapped somewhat by the quite recent nature of the TEAM Project as well as the recency of the studies and publications referred to in the Proposal. The writer was aware of some materials and hoped to identify still others.

Regardless of efforts to be inclusive, which was not the aim beind this study to begin with, there will invariably be comments which people will want to make which do not seem to fit in at any juncture. To care for this possibility of random comments--in fact, to provide for the deliberate lack of inclusiveness, since such inclusiveness would have made the questionnaire unreasonably long--the writer planned question #24 which asked:

> 24. WHAT ADDITIONAL COMMENTS DO YOU HAVE CONCERNING THE TEAM PROJECT THAT DO NOT SEEM TO FIT UNDER THE ANSWERS TO ANY OF THE ABOVE QUESTIONS?

It was hoped that this question would serve to guide future studies in terms of the types of questions which respondents would suggest.

The construction of a sampling instrument such as the questionnaire constructed for this study requires a delicate balance to be achieved. Such an instrument can be so short or poorly constructed that little information is achieved; it can be so long or detailed that possible respondents either do not complete the questionnaire or they respond too hurriedly to give a thoughtful reply. The writer sincerely attempted to achieve a proper balance between the two extremes. The questionnaire which has been presented in the preceding few pages is the result of his efforts for such a balance.

Accompanying the questionnaire was a cover letter[2] which provided several explanations. The reason for the addressee receiving the letter was stated. The need for the study being of interest to the addressee was mentioned.

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[2] See Appendix C, p. 329 for a copy of the cover letter.

The purposes for conducting the study were cited. A brief sketch of the questionnaire was given. The opportunity for the addressee to receive the results of the study was offered in exchange for the addressee's help in completing the questionnaire. A place was provided on the questionnaire for the respondent to indicate his desire to receive the results. Anonymity was guaranteed in order that professional or institutional identity not be disclosed. In order to promote responses, a stamped, return-address envelope was included with each questionnaire. In case this envelope became misplaced, the writer's return address was also placed on the questionnaire. Both outgoing and return mail were sent first-class rather than using a bulk-mail permit or a permit guaranteeing return postage in anticipation of a greater return. While the cover letter was multilithed, the heading and salutation were individually typed on the same typewriter that was used to type the multilith master.

Statistical Measures

Most of the data which were obtained from the returned questionnaires were simply tallied to determine frequency of response or non-response. The frequencies were divided into groupings according to the size, the type, and the geographical location of the various institutions. Any attempt to conduct a rigorous statistical treatment of data by means of correlation and inferential statistical measures should involve procedures showing that the respondents are representative of the total population. Even if the questions asked were evaluative, the results would be the normative response to an evaluative situation. The writer wanted to know if AACTE institutions were using the TEAM Project materials and what could be done, in general, to facilitate the program. It was decided that, due to the recent dissemination of material, general recommendations from those who chose to reply would be sufficient at this time. The writer recognizes the need for more sophisticated measures than tallying in many instances, but believed such procedures too premature for the TEAM Project curriculum phase at this time. He also believed that a rigorous follow-up effort might be unadvisable at such an early time in the TEAM Project dissemination.

The decision was made to divide the institutions according to size into five or six categories. Each category was to have between 100 and 200 institutions included in it from the mailing list of 810. The categories were to be delineated at a point whereby the category would begin at 500 students or a multiple of 500 and end in a number which was a multiple of 500 minus one. After reviewing the various points at which a division could be made, and hoping to keep each category approximately the same size, the categories set up for this study were 0-999, 1000-1499, 1500-2499, 2500-4999, 5000-9999, and 10,000 up.

The institutions could have been categorized by type into any of several possibilities. The possibilities included public, private, private-church related, private-non-church related, teachers' colleges, and liberal arts institutions. Because of the growing tendency for teachers' colleges to become multi-purpose colleges and universities, teachers' colleges were eliminated as a possibility. There is a tendency, also, for many church-related colleges to become partly or wholly autonomous. These colleges, many times, do not consider themselves as being affiliated with the ecclesiastical body which had previously lent financial support, yet many of these colleges have leading officials who bear ecclesiastical titles. Because of the difficulty in categorizing according to type of institutions, a two-category system was used: public and private.

The third category was that of geogrpahical location. A decision to create five to seven regions with each region including 100 to 200 institutions was made (see Figure 4). The states or territories in each region were to be

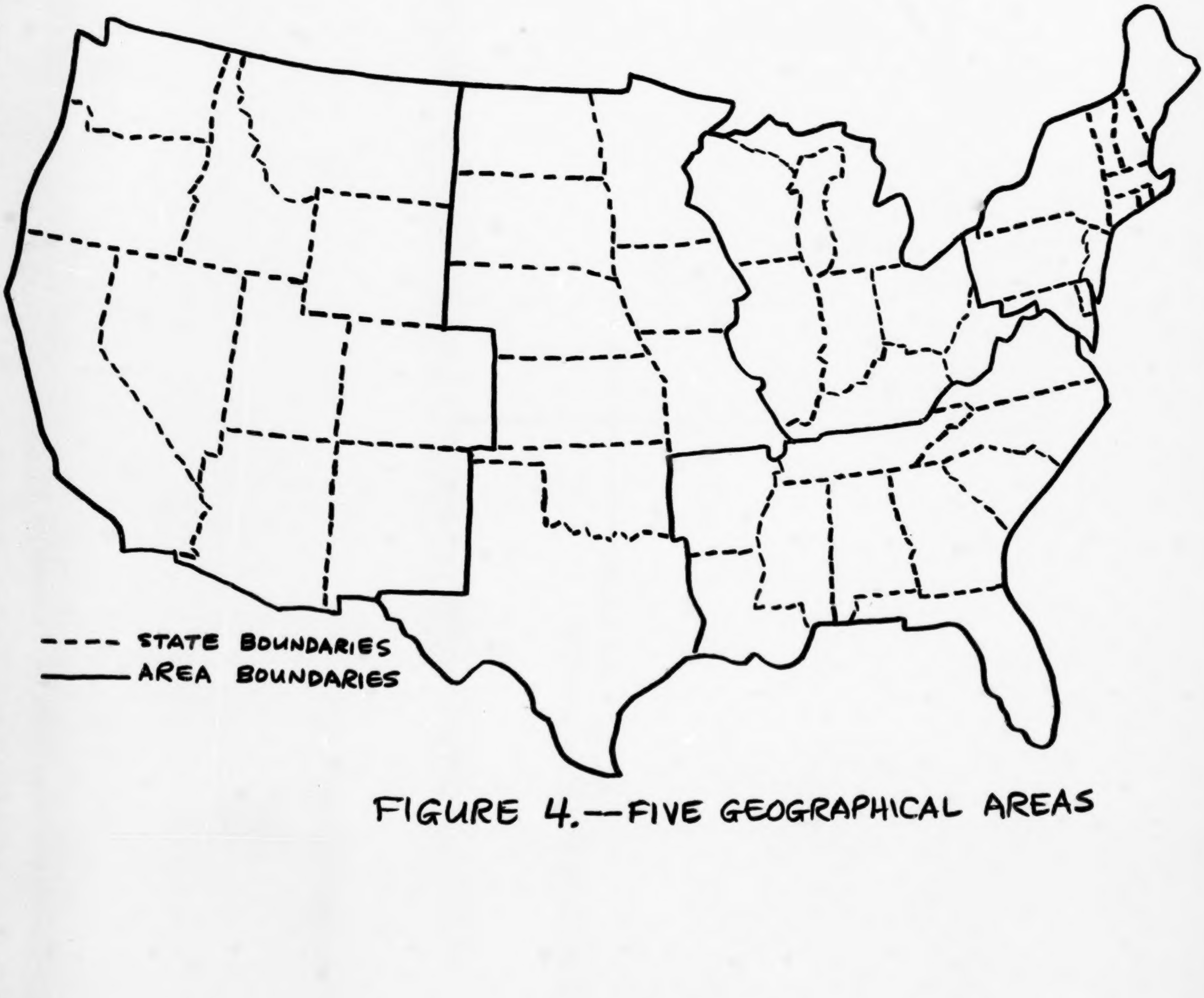
---- STATE BOUNDARIES
—— AREA BOUNDARIES

FIGURE 4.—FIVE GEOGRAPHICAL AREAS

contiguous and to have some similarities, if at all possible, that would exclude other states. There were to be no fewer than five nor more than fifteen states in a region. In the final result, the decision of assigning states became more arbitrary than purposive. There were five regions created: Northeast, South, Great Lakes, and Ohio River Valley, Midwest Plains, and Western.

The states in the Northeast lie to the east of the Appalachian Mountains' fall-line, mainly, and north of the Potomac River; tend to be industrialized-urbanized states or truck-garden states for the industrial Northeast; and are contiguous. The eleven states and one territory in this group are: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Delaware, and the District of Columbia. There are 184 member institutions of the AACTE in this region.

The region designated the South is comprised of the states of Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Louisiana, and Arkansas plus the Territory of Puerto Rico. These ten states and one territory include 147 AACTE member institutions. They are contiguous, are historically related, and are cotton- and tobacco-growing states.

The Great Lakes and Ohio River Valley Region has only seven states but 184 AACTE member institutions. These states are bounded roughly by Canada, the Appalachian Mountains, and the Mississippi River. It is the old West of the Revolutionary War and War of 1812 days. All of the states are at least partly included in what was colonial Virginia's western claims. The states of West Virginia, Kentucky, Ohio, Indiana, Illinois, Michigan, and Wisconsin make up this region.

The Midwest Region is bounded by Canada, Mexico, the Mississippi River, and the Rocky Mountains roughly. These are all plains states. While Arkansas and parts of Louisiana, Colorado, Montana, and Wyoming are in the same general area, the historical and physical characteristics of these states do not qualify them for the Midwest. The nine states of Texas, Oklahoma, Kansas, Missouri, Nebraska, Iowa, Minnesota, North Dakota, and South Dakota have 194 AACTE member institutions within their boundaries.

The Western Region includes all of those states except Texas that have some of the Rocky, Sierra Nevada, or Cascade Mountain Ranges in them plus Hawaii. The thirteen states of Colorado, Wyoming, Montana, Idaho, Utah, Nevada, New Mexico, Arizona, California, Oregon, Washington, Alaska and Hawaii have the fewest number of AACTE member institutions with 101 colleges and universities.

The number of colleges and universities which responded to the entire questionnaire, to the first eighteen questions, and to the first two questions, plus the number of non-responding institutions were tallied according to region, type, and size of institution. The relative differences in regard to response for each category can be scrutinized for gross differences in this way. In addition, the responses for each question are tallied by sub-categories.

Selection of the Population

The TEAM Project curriculum component as presented in the Proposal by LaGrone and Professional Teacher Education by the AACTE was distributed to the Chief Institutional Representative of each member institution. An individual can not be a member of the AACTE; institutional membership only is permitted. The AACTE asks that one person from each institution be designated as the Chief Institutional Representative. These representatives are to assume this responsibility on a long-term basis. It is they who receive all communiques and publications of the AACTE.

Since the Chief Institutional Representatives should be the most likely persons to know of the TEAM Project, the questionnaire was sent to them. Frequently, these persons have administrative responsibilities which place them in a position of power and institutional awareness. They should be better acquainted with institutional practices than many of their colleagues. Most of the respondents are involved in teacher education. Many of them have had experience in public school teaching. There is a sizable group that is composed of college and university instructors in various subject matter fields of specialization. Many Chief Institutional Representatives are presidents or deans of colleges, or chairmen of the various departments of humanities, arts, and sciences. A diversified group was involved, then.

The names of these representatives were obtained from the directories in the 1967 AACTE Yearbook[3] and the 1968 AACTE Yearbook.[4] The 1967 Yearbook was utilized to address most of the mailing. New member institutions were identified as soon as the 1968 Yearbook was received so that the main mailing could be completed.

The 1967 Yearbook identified 774 member institutions. The 1968 Yearbook listed thirty-six additional member institutions. Thus, a total of 810 questionnaires were mailed.

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[3] AACTE, Changing Dimensions in Teacher Education, Twentieth Yearbook of the Association, pp. 231-291.

[4] AACTE, Teacher Education: Issues and Innovations, Twenty-first Yearbook of the Association, pp. 300-364.

Analysis

Much of science's progress has been made because of the fact that some scientist has refused to accept the previously accepted conclusions. Ptolemy and Copernicus viewed the same general patterns of motion of the planets and stars; their conclusions concerning the universe were entirely different.

In 1929, Hullfish took the stand that there is a need for the use of philosophy in solving educational problems.[5] A type of research which might best be termed "philosophic research" is needed. This type of research, along with all other forms of research, has a faithfulness to the scientific method. Beginning with a hypothesis, data is gathered and brought to bear upon the hypothesis to reach conclusions, proving or disproving the original hypothesis. The deductive-inductive process that is utilized is the essence of the scientific method.[6] The procedures are the results of the individual engaging in reason, logic, and reflective thinking. The mental process of reaching a conclusion are the same for scientist and philosopher.

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[5] H. Gordon Hullfish, "Relation of Philosophy and Science in Education," Journal of Educational Research, Vol. XX (Oct., 1929), pp. 159-165.

[6] John W. Best, Research in Education, pp. 1-7.

It was one of the purposes of this study to apply the methods of philosophy to the TEAM Project curriculum phase. It was the task of the writer in this section of the chapter to describe the philosophic guidelines and procedures which were used to critically analyze the TEAM Project curriculum component. In order to accomplish this task, the nature of teaching must be described, the types of knowledges which teachers need must be outlined, procedures for curriculum building in teacher education must be established, and procedures for comparing the TEAM Project curriculum with these guidelines must be established. These guidelines would provide the external criteria of curriculum excellence with which the TEAM Project program would be judged. By analyzing the internal consistency of the TEAM Project curriculum materials with the guidelines for teacher education programs created by the TEAM Project authors, judgment by internal criteria would be achieved.

External criteria

External criteria consists of the application of prescribed curriculum guidelines and procedures upon the materials being evaluated. The origin of these criteria was outside the TEAM Project program. These guidelines and procedures gain their merit by being formulated in a logical fashion rather than being based upon tradition.

Where appropriate, reference was made to authorities, but only as they fit into the logical pattern. In this study, the TEAM Project curriculum materials were critically analyzed by the philosophic framework created by the writer for the scrutiny of teacher education programs. It was first necessary to establish the nature of teaching as an occupation. Based upon the nature of teaching, guidelines concerning the type of educational experiences were created. An analysis of teaching duties gave direction to the knowledges needed by prospective teachers. Guidelines concerning the organizing of knowledges and experiences were formulated. Using philosophic procedures, the methods of comparing the TEAM Project with the guidelines set up in this study were created.

The nature of teaching. Teaching is an occupation in which one individual helps one or more other individuals develop their rational powers. This statement of the nature of teaching is one which calls for explanation and philosophic support. In the next few paragraphs the writer provides the support necessary for the statement.

Man is, by nature, capable of thinking in terms of symbols or abstractions and of arranging his abstract thoughts into new relationships. The numerous written accounts of man's past, the world around him as he perceives it, and his relationship with other men attest to his thought capabilities. The similitude with which people who speak the same language describe a given object, the exact pattern with which mathematicians will solve a given problem, and the identical expressions in formulae and symbols with which scientists explain a known substance indicates man's symbolic and abstract potential. The differences that exist in the several theories concerning the nature of time, light, and space; the several types of geometry; lingual patterns; aesthetic and architectural expressions attest to the diversity with which man can create relationships among objects and/or symbols.

The ability to think symbolically and to organize these thoughts into new relationships implies the ability to engage in decision-making. Decision-making means choosing among alternatives. A choice cannot be made unless there are alternatives. The ability to create new relationships also creates alternatives. Man's ability to think, therefore, gives him the possiblity of decision-making.

Just as man's ability to create alternatives implies his ability to engage in decision-making, so his ability to pass on his accumulated knowledge in symbolic form implies his ability to teach another human. It is necessary to understand the meaning of teaching in light of man's ability to think. At least three factors must be considered when one views what teaching must accomplish: the achievement of similitude in expression; the reconstruction of relationships first conceived by other individuals; and, the stimulation of expression and of new conceptual relationships by each individual. Since man uses symbols and abstractions to communicate, organize, and preserve, it is essential that each new generation understand the expressions and relationships created and used by preceding generations. In order that man's knowledge proceed apace, it is just as essential that each generation not be limited to past knowledge but that knowledge continually be increased, expression be enlarged, and new relationships be created.

A technician is a person who performs actions or activities according to a prescribed pattern. A technologist is a person who performs actions or activities according to a changing pattern as he sees variables enter in which would require changes in the timing, sequence, or elements. Because of the various factors of environment, content, class size, student differences, communication, and learning which must be considered in any given situation, the teacher requires the knowledge of a technologist. The teacher must be given alternatives from which to choose and, more importantly, a philosophic base upon which to make choices since he will find teaching an occupation which calls for choices.

The decision-making which the teacher engages in apparently can have a better basis than "common sense." If "common sense" were a sufficient basis, then the teaching presently occurring would be at the state of perfection which is desirable. The writer believes teaching needs to be improved beyond its present condition. "Common sense" typically is not a reflective process, but is an automatic, thoughtless way of responding. This is the type of teaching which would say that if a child is not working up to his capabilities, the best way to motivate him is to criticize. It is the same type of knowledge that told man that the world is flat, the atom is indivisible, Negroes are inferior, poverty is to be expected, and beating will motivate a child to learn. The writer believes the way to improve teaching is to provide that knowledge which will enable a teacher to base his teaching upon the observations of science and the wisdom of reflective study. Science and philosophy can provide the intelligence and wisdom necessary for establishing concepts concerning education. The study of previously held views and observations and the construction of one's own views will help achieve the depth of understanding needed in teaching, while a lack of serious study of teaching would leave deficiencies.

Teaching is an occupation of such a nature that a scientific and philosophic basis for decision-making, a basis which involves the application of knowledge, is the only reasonable approach if one is to achieve optimal learning in his students.

Since teaching involves the transmission and generation of knowledge, an interpersonal relationship is involved. The learned is aiding the development of intelligence in the learner. He who knows the conventional meanings shares these meanings. He who has understood previously-ascribed relationships helps the uninformed reconstruct meaning. He who has been creative encourages the neophyte to expand the area of the known. In all types of teaching, there is an active interpersonal relationship that occurs.

Because of man's nature being as it is, teaching is of necessity a decision-making, interpersonal involvement. Each person can think abstractly and can communicate abstract thoughts to others. The conscious and planned activities through which one individual develops and directs the intellect of one or more other persons is called teaching. Since one person is interacting with others, teaching is interpersonal. Since teaching is an activity requiring intellect, it is a decision-making situation. To indicate the ways in which the teacher can aid in the development of the students' rational powers would be to restrict alternatives. This would violate the very nature of teaching itself. The ways in which the teacher can achieve his purposes must remain open so that the teacher may continually envision new alternatives that will achieve the development of still further facets of man's intellect. The teacher must continually view his intellect and the students' intellects in an active process of working together because of man's nature. The preparation of teachers must be directed toward these ends.

Requirements for teacher education. The nature of teaching as described in the preceding paragraphs delimits the curriculum of teacher education. A "how-to-do-it" or "bag-of-tricks" approach is ruled out since teaching is viewed, necessarily, as a decision-making task. The use of a job-analysis approach as a starting point for teacher education is also eliminated. This is because such an approach perpetuates existing ways of teaching. Teachers should be given those knowledges which will help them create new patterns of instruction rather than continue present ways. For reasons similar to finding the job-analysis approach unacceptable, an internship program alone is not sufficient; the intern will not create new patterns of instruction but will perpetuate the master's ways. Teaching must be a creative, decision-making occupation.

Teacher education must promote the development of individuals who can perform accordingly.

The type of individuals so desired in such a field as teaching will not occur by chance. The planned development of them must occur. This planned development must aim at developing both background and decision-making knowledge of the teacher so that he can perform his teaching duties in an intelligent manner.

Two aspects of teacher development appear as necessities. One is the aforementioned background knowledge and the second is the fostering of decision-making ability. The background knowledge would consist of the symbolic and abstract thought and the existing relationships concerning education which the prospective teacher would need to know. Decision-making ability would be fostered so that the prospective teacher could create his own new relationships.

Because of the nature of teaching, certain essential ideas and concepts are necessary as background knowledge for the prospective teacher. The first and most obvious is an understanding of the need for education. This would lead to an explanation of the necessity to have teacher education. Next would come the presentation of numerous concepts of teaching. These should be considered in light of what education is. Many concepts of teaching would be consistent with a portion of the concept of education, hence would be usable to a limited extent. The factors which make up the several concepts of teaching would provide the bulk of the background knowledge needed by the prospective teacher. Teaching does not occur in a social vacuum. As a result, some knowledge of the social, historical, philosophic, economic, and political environment in which the school exists as an institution would appear justifiable. The process of teaching involves the factors of knowledge, communication, planning, learning, evaluation, motivation, methodology, objectives, learning activities, classroom control, and bases for the curriculum. Time and space does not permit an exhaustive list with a justification for each factor to be presented. Rather it seems best to make the list of factors suggestive so that the factors and their interrelationships might encourage the rational powers of the reader. The writer presents Figure #5 as a framework for considering the background knowledge needed in the professional component.

One shortcoming of the professional component as pictured in Figure #5 is that it is too inclusive in its view of content. The professional component needs to be delimited through some criterion. The criterion which the writer would suggest is that all content must either be part of the rationale for teacher education or be

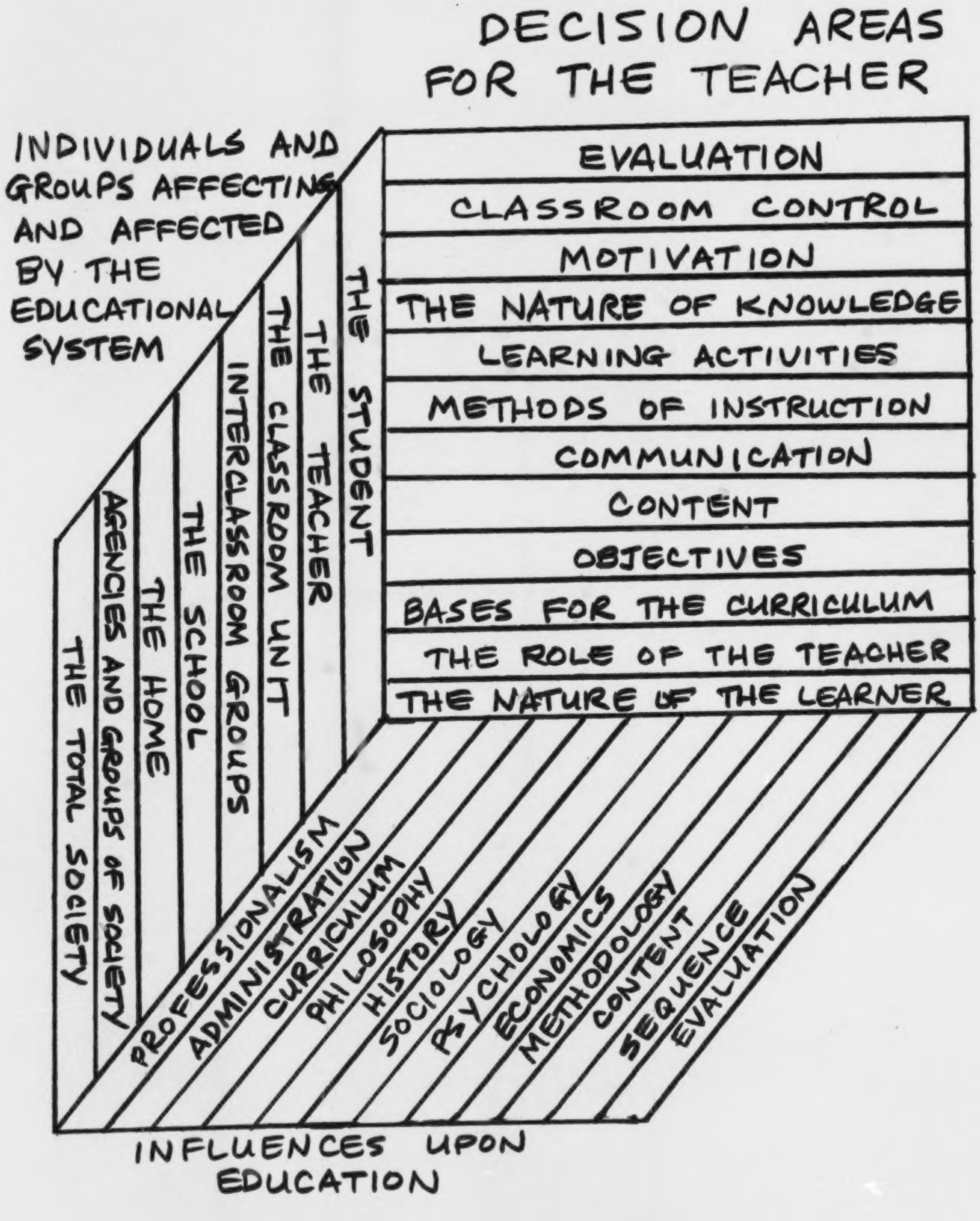
DECISION AREAS FOR THE TEACHER
EVALUATION
CLASSROOM CONTROL
MOTIVATION
THE NATURE OF KNOWLEDGE
LEARNING ACTIVITIES
METHODS OF INSTRUCTION
COMMUNICATION
CONTENT
OBJECTIVES
BASES FOR THE CURRICULUM
THE ROLE OF THE TEACHER
THE NATURE OF THE LEARNER
INDIVIDUALS AND GROUPS AFFECTING AND AFFECTED BY THE EDUCATIONAL SYSTEM
THE STUDENT
THE TEACHER
THE CLASSROOM UNIT
INTERCLASSROOM GROUPS
THE SCHOOL
THE HOME
AGENCIES AND GROUPS OF SOCIETY
THE TOTAL SOCIETY
PROFESSIONALISM
ADMINISTRATION
CURRICULUM
PHILOSOPHY
HISTORY
SOCIOLOGY
PSYCHOLOGY
ECONOMICS
METHODOLOGY
CONTENT
SEQUENCE
EVALUATION
INFLUENCES UPON EDUCATION

FIGURE 5.--A SCHEMATIC FRAMEWORK FOR SELECTING BACKGROUND KNOWLEDGE FOR THE PROFESSIONAL COMPONENT

directly usable by the teacher in teacher activities. To state that content be "directly usable" is to be vague and unexact. This criterion does give some dimension to the selection of content, however. The final decision of the value of particular elements of content will remain somewhat arbitrary, therefore.

The fostering of decision-making ability in teachers is the second aspect of teacher education. Such fostering should not be considered the duty of student teaching alone. In fact, the dichotomy of theory and practice or of information and application is untenable in the light of recent investigations into the nature of teaching and learning.[7] It appears that much of the fostering of decision-making ability must occur concurrently or in sequence with the gaining of background material.

The writer views two tendencies in education courses as inadequate and foolish. The one tendency is the study of education as subject matter while the other is the training of technicians. Combs speaks of the tendency to study education as subject matter when he says that teachers have been taught ". . . _about teaching_ instead of . . . [how] to become teachers."[8] [Italics Combs] One main difference between professional preparation and the study of education is in regard to application. A second is that professional preparation should be delimited in background material to essential information only. The training of technicians requires that the person being trained knows how to perform certain routine tasks or skills quite well. The technician may even be able to perform several skills that are alternatives of one another, but he does not have the theoretical knowledge necessary to decide which alternative to use in differing situations. The preparation of teachers should include the teaching of skills and techniques, to be sure, but should go beyond to include the theory about when to use these skills and techniques. The point has been made that a person need not know why something works in order to act professionally, but when something works is essential. Thus, the medical profession utilized sulfa drugs properly without knowing how sulfa worked, but they did know when sulfa worked.[9] Moreover, they knew the general purpose for the medical profession and of the need for studying medicine.

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[7] Krathwohl, Bloom, and Masia, _Taxonomy of Educational Objectives: The Classification of Educational Objectives. Handbook II: Affective Domain_, pp. 19-20; LaGrone, _Proposal_, pp. 62-63; AACTE, _Professional Teacher Education_, p. 73.

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[8] Arthur W. Combs, The Professional Education of Teachers: A Perceptual View of Teacher Education, p. 28.

[9] Harry S. Broudy, "The Role of the Foundational Studies in the Preparation of Teachers," Chapter One (pp. 1-22) in Stanley Elam (ed.), Improving Teacher Education in the United States, p. 6.

When a teacher education program is properly designed, it will produce changes in the teaching performed by a teacher. Rather than teach in the manner in which he would teach if he had no course work in teacher education, the teacher should be enabled to perform intelligently and in a manner that will be more advantageous to the achievement of learning by the student. Schwilck[10] reports that after ten years of observation, Lloyd Trump found that innovative practices such as team teaching, modular scheduling, and large- and small-group instruction have not produced significant differences in learning. Trump attributes the lack of results to the fact that there were organizational changes but no changes in the basic methods of teaching. Part of this may be due to the lack of self-evaluation procedures for teachers.

Methods of comparison. The general guidelines for teacher education programs which have been created in the preceding pages led to the formation of several questions. These questions formed the evaluation by external criteria of the TEAM Project curriculum component. Through the use of reasoning and informal logic the writer evaluated the

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[10] Gene L. Schwilck, "Reorganizing Pre-Collegiate Education," Danforth News and Notes: An Occasional Publication of the Danforth Foundation, Vol. IV (Nov., 1968), p. 2.

TEAM Project program according to the questions of external criteria. The questions which were asked were:

1. Is the teacher education program under scrutiny based upon a sound philosophy regarding the natures of man and teaching?
2. Does the program being considered include background knowledge and does it foster decision-making ability?
3. Are the prospective teachers in this program involved in the learning of both cognitive subject matter and technical skills in an integrated fashion so that the prospective teachers have the theoretical knowledge to decide when to use the particular skills?
4. Does the program provide an introduction to the need for education and teacher education?
5. Does the program include knowledges and skills from the various areas indicated in Figure #5?
6. Does the program include areas which would appear not to be needed or useful to the prospective teacher?
7. Does the program provide knowledges which could be used by the prospective teacher to perform self-evaluation during his teaching in order to discover areas that need improvement?

The application of these questions to the TEAM Project curriculum component constituted the external criteria phase of analysis. The results of the questionnaire, both the statistical findings and the comments by the respondents, were used to provide further evidence of the validity of the writer's opinions and to identify areas that needed closer scrutiny by external criteria.

Internal criteria

Internal criteria consists of the application of prescribed guidelines and procedures upon the materials being evaluated just as external criteria does. The differences occur in the source of the guidelines and procedures. Whereas external criteria uses guidelines and procedures which originated outside the TEAM Project, internal criteria uses guidelines and procedures which were created within the TEAM Project. The questions which were formulated relative to the TEAM Project's guidelines and procedures for an appropriate teacher education program are:

1. Does it have a sound theoretical foundation?
2. Does it have an organizing center?
3. Is the content used in the program based upon teacher behaviors so that the content has application?
4. Is performance rather than memory stressed in the program?
5. Is the organization of content into courses based upon the use of the natural dynamics of the teaching situation rather than upon the research categories of traditional programs of teacher education?
6. Is multimedia utilized in order to provide perceptual input?

7. Is Woodruff's Cybernetic Model utilized in the construction of topics for presentation?

8. Does the program allow the construction of new models of teaching rather than call for imitation of existing models as an internship would occasion?

9. Does the program incorporate those areas which are suggested in the "Model for the Dynamics of Teaching" (Figure #1, *supra*, p. 38)?

10. Does the program properly utilize the "Simple Instructional System" (Figure #2, *supra*, p. 41) as an organizing center?

The application of these questions to the TEAM Project curriculum component constituted the internal-criteria phase of analysis.

By way of summary, this chapter presented the several portions of the procedures which were used in this study. The questionnaire used to conduct the survey was described. The statistical measures used to evaluate the statistical data gathered by the questionnaire were explained. The procedures used in the selection of the population for the survey were presented. The final section in the chapter described the techniques of internal and external criteria and the procedures of making general observations which were used to analyze the TEAM Project curriculum component.

Chapter Four presents the results of the pilot study, the statistical findings of the questionnaire, and the respondents' comments. Chapter Five provides an evaluation of the TEAM Project curriculum phase through external and internal criteria.

CHAPTER IV

RESULTS OF THE SURVEY

The purpose of this chapter is to present the findings from the survey. The first portion of the chapter describes the Iowa pilot study. The second section contains the statistical findings of the questionnaire. The third section evaluates the significant comments made by respondents to the questionnaire.

Iowa Pilot Study

On March 30, 1968, the pilot study mailing was sent out. The institution where the writer was employed is located in Iowa. Because of close proximity to and professional acquaintances with a number of people who are AACTE Chief Institutional Representatives at the various colleges and universities in Iowa, the writer believed he might receive faster, more thoughtful, and more complete responses from these people. Based upon the pilot study, the questionnaire was to be revised before the main mailing.

Of the twenty-three member institutions of the AACTE in Iowa, a total of twenty institutions, or 87 per cent, responded. Of these twenty, thirteen or 57 per cent responded in time to be used in revising the questionnaire.

The pilot study questionnaire[1] indicated the need for three major changes in addition to several minor rewordings. The first major change was in regard to the general evaluation of the TEAM Project curriculum component. The pilot study questionnaire asked:

> 1. HAVE YOU ADOPTED OR WILL YOU BE ADOPTING THE TEAM PROJECT PROGRAM FOR TEACHER EDUCATION?
>
> 3. DO YOU THINK THE TEAM PROJECT PROGRAM IS A VALID PROGRAM FOR TEACHER EDUCATION?
>
> 4. IF YOU HAVE ADOPTED (OR WILL BE ADOPTING) THE TEAM PROJECT PROGRAM, TO WHAT EXTENT IS (OR WILL BE) YOUR ADOPTION?

The responses to these questions, especially in the "Comments" section indicated two changes in format were necessary. First, the respondents did not believe the word "adoption" carried the proper connotation. Lawrence[2] mentions that the Proposal was intended to be a working paper for faculty study groups; in spite of the fact that the TEAM Project curriculum phase can be viewed as a complete program for the professional component of teacher education, the pilot study respondents viewed the Proposal as containing ideas to incorporate into their existing programs. The word "adoption" was not used in the revised questionnaire. Secondly, statements were made by pilot study respondents referring to the content, organization, rationale, and use of media. Thus, it seemed wise to create a series of questions asking about the various aspects of content, organization, rationale, and multimedia usage as well as one general question asking if the TEAM Project materials had had any influence upon the particular institution. The general question became question #2 of the revised questionnaire with questions #3 through #18 providing a breakdown of the broad question into specific components.

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[1] The pilot study questionnaire is found in Appendix A, pp. 317-322 and the revised questionnaire in Appendix B, pp. 323-328 of this study for the reader who wishes to compare the two questionnaires.

[2] Lawrence, "Foreword," in LaGrone, Proposal, p. iv.

The second major change indicated by the pilot study was in regard to the questions about the various sections. The decision was made to eliminate the hierarchical rating scales for indicating the value of the various sections and for indicating the amount of use at a particular institution. It was also decided to combine the two checklists. Several respondents answered only to one of the questions. Many used only two columns, providing no discrimination between topics. The value of having a rating scale seemed questionable due to the type of responses. The desire to obtain answers to both the value and the use of each section seemed sufficient to combine the two checklists.

The third major change was the addition of a question concerning the advantages of the TEAM Project curriculum for the professional component. Several respondents to the pilot study indicated that they believed the TEAM Project materials had several advantages. The pilot questionnaire contained only a question (#7) about the drawbacks. It seemed wise to query about both the drawbacks and the advantages in the revised questionnaire. Thus, question #20 was formulated.

A number of minor changes were made in the wording of questions. Several others were made in the sequence of questions. All of the changes were reflections upon the comments and types of responses of the pilot study respondents.

Statistical Findings From the Questionnaire

Questionnaires were mailed to 810 Chief Institutional Representatives of AACTE member institutions. This includes the twenty-three pilot study questionnaires. The responses from the pilot study respondents were interpolated to fit into the framework of the revised questionnaire as much as possible. A total of 414 questionnaires (51 per cent) were returned in time to be included in this study.

Table 2 presents a breakdown of responses (and non-responses by size, type, and geographical location of the institution. The various types of responses categoried were:

minimum -- those questionnaires to which the respondents had responses only to the first two questions or less but did return the questionnaire;

partial -- those questionnaires to which the respondents had responses to more than the first two questions, but did not complete question #21 which asked the value and use of each topic;

complete -- those questionnaires to which the respondents had responses to questions #1 through #21;

total responses -- the total of minimum, partial, and complete responses;

non-responses -- those institutions that did not return the questionnaire;

total -- the total of all minimum, partial, and complete responses plus non-responses.

Table #2 indicates that the various types of responses were well distributed according to size, type, and region. The only reason that any of the cells in the table had a low frequency was that there were few institutions in the particular region of that size or type rather than a different type of response being given. In general,

TABLE 2. SUMMARY OF QUESTIONNAIRE RETURNS AND NON-RETURNS

		REGIONS (SUBDIVIDED INTO TYPE OF INSTITUTION)																	
		Northeast			Great Lakes and Ohio River Valley			South			Midwest			West			Totals		
Size of Insti-tution	Response Made	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals
0-999	Minimum	3	9	12	0	13	13	0	8	8	1	19	20	1	4	5	5	53	58
	Partial	0	0	0	0	3	3	0	2	2	0	4	4	0	2	2	0	11	11
	Complete	1	4	5	0	4	4	0	3	3	1	7	8	1	3	4	3	21	24
	Resp. Total	4	13	17	0	20	20	0	13	13	2	30	32	2	9	11	8	85	93
	Non-Resp.	8	15	23	0	13	13	1	12	13	1	21	22	0	3	3	10	64	74
	Totals	12	28	40	0	33	33	1	25	26	3	51	54	2	12	14	18	149	167
1000-1499	Minimum	0	2	2	0	16	16	1	7	8	1	14	15	0	3	3	2	42	44
	Partial	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	2	2
	Complete	0	2	2	0	3	3	0	1	1	1	6	7	1	1	2	2	13	15
	Resp. Total	0	4	4	0	19	19	1	8	9	2	21	23	1	5	6	4	57	61
	Non-Resp.	1	11	12	0	22	22	4	14	18	4	18	22	2	8	10	11	73	84
	Totals	1	15	16	0	41	41	5	22	27	6	39	45	3	13	16	15	130	145
1500-2499	Minimum	3	6	9	1	13	14	1	3	4	3	7	10	2	2	4	10	31	41
	Partial	0	0	0	1	1	2	1	1	2	1	1	2	0	0	0	3	3	6
	Complete	1	0	1	0	8	8	5	0	5	1	1	2	0	0	0	7	9	16
	Resp. Total	4	7	10	2	22	24	7	4	11	5	9	14	2	2	4	20	43	63
	Non-Resp.	8	11	19	4	7	11	8	3	11	5	7	12	2	7	9	27	35	62
	Totals	12	18	29	6	29	35	15	7	22	10	16	26	4	9	13	47	78	125

TABLE 2. (CONTINUED)

Size of Insti-tution	Response Made	REGIONS (SUBDIVIDED INTO TYPE OF INSTITUTION)																	
		Northeast			Great Lakes and Ohio River Valley			South			Midwest			West			Totals		
		Public	Private	Totals	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals	Public	Private	Totals
2500-4999	Minimum	9	6	15	2	2	4	6	2	8	9	3	12	3	1	4	29	14	43
	Partial	1	0	1	1	2	3	2	1	3	1	0	0	0	0	0	5	3	8
	Complete	7	0	7	1	0	1	5	0	5	5	0	6	2	0	2	20	0	20
	Resp. Total	17	6	23	4	4	8	13	3	16	15	3	18	5	1	6	54	17	71
	Non-Resp.	11	7	18	5	5	10	13	4	17	2	2	4	5	3	8	36	21	57
	Totals	28	13	41	9	9	18	26	7	33	17	5	22	10	4	14	90	38	128
5000-9999	Minimum	3	4	7	7	4	11	5	2	7	9	0	9	6	3	9	30	13	43
	Partial	0	0	0	0	1	1	1	0	1	2	2	4	0	0	0	3	3	6
	Complete	2	2	4	1	0	1	2	0	2	5	1	6	1	0	1	11	3	14
	Resp. Total	5	6	11	8	5	13	8	2	10	16	3	19	7	3	10	44	19	63
	Non-Resp.	12	7	19	11	1	12	11	2	13	6	2	8	10	0	10	50	12	62
	Totals	17	13	30	19	6	25	19	4	23	22	5	27	17	3	20	94	31	125
10,000 Up	Minimum	4	5	9	8	0	8	3	0	3	4	1	5	6	1	7	25	7	32
	Partial	1	1	2	2	0	2	1	0	1	3	0	3	2	0	2	9	1	10
	Complete	1	4	5	6	0	6	2	0	2	5	0	5	3	0	3	17	4	21
	Resp. Total	6	10	16	16	0	16	6	0	6	12	1	13	11	1	12	51	12	63
	Non-Resp.	6	6	12	11	5	16	9	1	10	6	1	7	12	0	12	44	13	57
	Totals	12	16	28	27	5	32	15	1	16	18	2	20	23	1	24	95	25	120
Totals	Minimum	22	32	54	18	48	66	16	22	38	27	44	71	18	14	32	101	160	261
	Partial	2	1	3	4	7	11	5	4	9	7	8	15	2	3	5	20	23	43
	Complete	12	12	24	8	15	23	14	4	18	18	15	33	8	4	12	60	50	110
	Resp. Total	36	45	81	30	70	100	35	30	65	52	67	119	28	21	49	181	233	414
	Non-Resp.	46	57	103	31	53	84	46	36	82	24	51	75	31	21	52	178	218	396
	Totals	82	102	184	61	123	184	81	66	147	76	118	194	59	42	101	358	452	810

about one-fourth of the responses were fully completed responses, one-tenth were partially completed, and two-thirds were minimally completed. Representatives from public institutions tended to return a larger percentage of fully completed questionnaires and a smaller percentage of minimally completed questionnaires than did their private institution counterparts.

Because of the small number of institutions contained in some of the subcategories, it seemed inappropriate to use such a minute breakdown as multiple categories provide when responses to each item on the questionnaire were analyzed. Variation in responses to individual items were scrutinized only in regard to region, size, or type of the institution.[3] The observations which the writer made in regard to differences of response are included wherever appropriate in the following pages. Sometimes these observations are on an item-by-item basis and sometimes on a generalized basis for multiple-item trends.

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[3] The responses by region, size, or type of institutions are found in Table 10 which is located in Appendix D, pp. 330-336. The writer believed the size of this table and its limited contribution did not warrant inclusion in the main body of this report. Frequency of response is given only for the nationwide group of responses in the main body of this study.

Table 3 presents the responses to question #1:

1. ARE YOU ACQUAINTED WITH HERBERT F. LaGRONE'S *A PROPOSAL FOR THE REVISION OF THE PRE-SERVICE PROFESSIONAL COMPONENT OF A PROGRAM OF TEACHER EDUCATION*?

Of the 414 total responses, over 28 per cent responded "Yes" and over 32 per cent responded "Somewhat." More than 61 per cent of the respondents therefore indicated that they have some knowledge of the *Proposal*. If no one at the other colleges and universities (the ones from which there were no responses) know of the *Proposal*, the 253 representatives who did respond affirmatively represent more than 20 per cent of the 1186 institutions engaged in teacher preparation and more than 30 per cent of the AACTE member institutions. If the smallest of these figures are used, it appears that the *Proposal* reached a remarkably large audience in the first four years after its introduction.

TABLE 3. RESPONSES TO QUESTION #1

	Response to Total Questionnaire		
Response	Minimum	Partial and Complete	Total
Yes	29	89	118
Somewhat	84	51	135
No	137	13	150
Blank	11	0	11
Total	261	153	414

Table 3 indicates further that there was a decided tendency for those who knew of the Proposal to respond with more than a minimum response, whereas those who did not know of the Proposal did respond with a minimum response. Of the "Yes" respondents to question #1, more than 75 per cent gave a partial or complete response to the questionnaire; those who responded "Somewhat" to question #1 gave a partial or complete response in 37 per cent of the instances. Those who were informed regarding the TEAM Project were, for the most part, quite willing to provide information, in the writer's judgment. Many respondents provided written comments, some of which were quite lengthy. It could be expected that the respondents who did not know of the TEAM Project would not typically provide more than a minimum response. This portion of the table provides no significant meaning, therefore. It cannot be assumed that those knowledgeable of the TEAM Project curriculum phase would answer beyond a minimum response, however, so this portion does indicate that knowledge of the TEAM Project results in sufficient enthusiasm to respond to the questionnaire used in this study.

There seemed to be some tendency for the institutions in the Midwest Region to be better informed and those in the West to be poorer informed than the average. Also, public institutions from which responses were obtained were somewhat better informed than responding private institutions. These tendencies do not seem strong enough to warrant much emphasis being placed upon them. No tendencies seemed to be present regarding size of institution and degree of being informed.

Of even greater significance to this study than question #1 was question #2 which asked:

> 2. HAVE THE TEAM PROJECT MATERIALS (*Proposal*, *Conceptual Models*) OR WORKSHOPS INFLUENCED THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION IN ANY WAY?

The reason for this question being so important is that the responses to it will help determine how much innovation has been occasioned through the TEAM Project. Table #4 presents the responses to question #2. It can be readily observed that, once again, as with question #1, a "Yes" response is most generally associated with a partial or complete response to the questionnaire, while a "No" response (of necessity, almost) is associated with a minimum response to the questionnaire. Of those who responded "Yes" to question #2, there were 82 per cent who provided responses to more questions than just the first two.

TABLE 4. RESPONSES TO QUESTION #2

Response	Response to Total Questionnaire		
	Minimum	Partial and Complete	Total
Yes	18	87	105
No	222	63	285
Blank	21	3	24
Total	261	153	414

Of the 414 respondents to the questionnaire, 105 acknowledged the influence of the TEAM Project at their institutions. This means that in the four-year period following the publication of the Proposal, 25 per cent of the institutions from which responses were received did acknowledge the influence of the TEAM Project upon their teacher education programs. If no other institutions other than these 105 were influenced by the TEAM Project, the TEAM Project has achieved innovation in 12 per cent of all AACTE member institutions and in 8 per cent of all institutions engaged in teacher preparation. Some readers may view the TEAM Project curriculum phase as a total item of innovation; other readers may perceive it as a means whereby a number of innovative approaches to teacher education were promoted. In either instance, the rate and degree of influence it had during its first four years were faster and larger than the normal rate and degree of innovation. The only tendency observable, which was not a strong tendency, was for public institutions more than private institutions to utilize portions of the TEAM Project.

Through a comparison of answers to questions #1 and #2, it is possible to determine if knowledge of the TEAM Project ideas as expressed in the *Proposal* concerning the teacher education curriculum tends to occasion change. Table 5 provides this comparison. To provide an even more precise measurement, the type of response to the total questionnaire--minimum, partial, and complete--is indicated in Table 5. In this way, it can be determined if increased knowledge tends to result in increased utilization and increased willingness to evaluate. The results of this comparison indicate that there is a tendency for increased knowledge of the *Proposal* to result in utilization of the TEAM Project ideas and to result in a more complete response to the questionnaire. Such a comparison is valid since knowledge of the *Proposal* does not of necessity result in the use of TEAM Project ideas and it is possible to have adopted a few of the TEAM Project ideas without ever having heard of the *Proposal*, especially because of the influence of the media workshops.

Of those respondents who responded "Yes" to question #1 ("Are you acquainted with. . . *Proposal*. . .?), 58 per cent answered "Yes" to question #2 ("Have the TEAM

TABLE 5. COMPARISON OF RESPONSES TO QUESTIONS #1 AND #2

Type of Response to Questionnaire	Responses to Question #1	Responses to Question #2 Yes	No	Blank	Total
Minimum	Yes	7	22	0	29
	Somewhat	6	77	1	84
	No	5	123	9	137
	Blank	0	0	11	11
	Total	18	222	21	261
Partial and Complete	Yes	62	26	1	89
	Somewhat	22	28	1	51
	No	3	9	1	13
	Blank	0	0	0	0
	Total	87	63	3	153
All Respondents	Yes	69	48	1	118
	Somewhat	28	105	2	135
	No	8	132	10	150
	Blank	0	0	11	11
	Total	105	285	24	414

Project materials. . . influenced. . . your institution. . . ?" and 75 per cent responded beyond question #2. These figures appear even more remarkable when it is considered that only 26 per cent (118 respondents) of the 414 respondents answered "Yes" to question #1 and only 36 per cent (153 respondents) responded beyond question #2. On the other hand, of those respondents who responded "No" to question #1, 88 per cent also responded "No" to question #2, and only 9 per cent responded beyond question #2. Those who responded on question #1 that they knew of the Proposal "Somewhat," responded "No" to question #2 a total of 77 per cent of the time and responded beyond question #2 only 38 per cent of the time. To provide a graphic representation of these percentages, Table 6 was constructed.

TABLE 6. COMPARISON BY PERCENTAGE OF RESPONSE TO QUESTION #1 WITH RESPONSE TO QUESTION #2 AND COMPLETION OF QUESTIONNAIRE

Response to Question #1	Response to Question #2			Responded Beyond Question #2	
	Yes	No	Blank	Yes	No
Yes	58	41	1	75	25
Somewhat	21	77	2	38	62
No	5	88	7	9	91
Blank	0	0	100	0	100

The writer recognizes that there is a high degree of a self-proving tendency or circular proof involved when the answers to the first two questions are compared if only the "No" and "No" combination ("No" to both question #1 and question #2) is considered. The significant portion is that with increased knowledge of the TEAM Project comes increased usage, since this tendency would not have to occur.

Table 6 is of particular value to this study since it shows that the large majority of respondents who considered themselves knowledgeable about the curriculum phase of the TEAM Project tended to complete the questionnaire. As a result, it can be reasonably assumed that the responses to the questionnaire used in the study represent an accurate evaluation of what the strengths and weaknesses of the TEAM Project are. No tendency was seen in regard to the various combinations of response possibilities by location or size of institution, but public institutions had a higher than average number of "Yes" responses to both questions #1 and #2 while private institutions replied in a combination of "Somewhat" or "No" to question #1 and "No" to question #2 much more frequently.[4]

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[4] See Table 11, "Questions #1 and #2 Response Combinations by Location, Size, and Type of Institution." This table is located in Appendix E, p. 337.

Questions #3 through #18 considered the value, influence, and utilization of the TEAM Project curriculum phase by the respondents. Taken as a group, these sixteen questions provide a good summary view of the impact that the TEAM Project was having upon the respondents when this study was conducted. Questions #3 through #6 considered the rationale, #7 through #10 asked about the organization of course work, #11 through #14 pertained to the content, and #15 through #18 dealt with the multimedia approach. By viewing these questions in eight sets of four, it is possible to gain a total perspective of the responses to the dimensions of:

1) rationale -- questions #3 - #6
2) organization of course work -- questions #7 - #10
3) content -- questions #11 - #14
4) multimedia approach -- questions #15 - #18 and #20B
5) concrete value -- questions #3, #7, #11, #15, #16
6) relative value -- questions #4, #8, #12, #20B
7) utilization -- questions #6, #10, #13, #17
8) influence -- questions #5, #9, #14, #18

This series of questions was answered by 153 respondents. These 153 respondents constitute 37 per cent of the respondents and 19 per cent of the entire mailing. Table 7 presents the responses to this series of sixteen questions.

TABLE 7. CROSS-COMPARISON OF QUESTIONS PERTAINING TO THE VALUE, INFLUENCE, AND UTILIZATION OF RATIONALE, ORGANIZATION, CONTENT, AND MULTIMEDIA

Type of Questions	Questions About Rationale				Questions About Organization				Questions About Content				Questions About Multimedia			
	No.	Response	Frequency	Per Cent	No.	Response	Frequency	Per Cent	No.	Response	Frequency	Per Cent	No.	Response	Frequency	Per Cent
Questions About Concrete Value	3	Yes	90	59	7	Yes	78	51	11	Yes	48	31	15	Yes	128	82
													16	Yes	99	65
										Part of it	69	45				
		No	7	5		No	12	8		No	0	0	15	No	0	0
													16	No	2	1
		Undecided	47	31		Undecided	49	32		Undecided	21	14	15	Undecided	15	10
													16	Undecided	40	26
		Blank	9	6		Blank	14	9		Blank	15	10	15	Blank	12	8
													16	Blank	12	8
Questions About Relative Value	4	Superior	81	53	8	Superior	82	54	12	Superior	78	51	20B	Superior	48	36
		Equal	34	22		Equal	33	22		Equal	33	22				
		Inferior	4	3		Inferior	2	1		Inferior	0	0				
		Undecided	23	15		Undecided	26	17		Undecided	29	19				
		Blank	11	7		Blank	10	6		Blank	13	8		Blank	84	63
Questions About Utilization	6	Yes	9	6	10	Yes	17	11	13	All	1	1	17	Yes	40	26
		Partially	72	47						Some	111	73		Partially	95	62
		No	65	42		No	115	75		None	23	15		No	9	6
		Blank	7	4		Blank	21	14		Blank	18	12		Blank	9	6
Questions About Influence	5	Yes	89	58	9	Yes	54	35	14	Yes	18	12	18	Yes	8	5
										Partially	55	36		Partially	33	22
		No	54	35		No	81	53		No	45	29		No	56	37
		Blank	10	6		Blank	18	12		Blank	35	23		Blank	56	37

It must be considered that these questions are not entirely parametric. As a result, one item could have received a more favorable response than another item simply because it is worded in a more accepting fashion for the respondent. Nevertheless, the writer believed that the cross-comparison of answers even to non-parametric questions provided benefits that outweighed the dangers.

The first question in the series read:

> 3. DO YOU THINK WOODRUFF'S CYBERNETIC MODEL AND ITS IMPLICATIONS PROVIDE A VALID RATIONALE FOR TEACHER EDUCATION?

In this question about the concrete or absolute value of the rationale, 59 per cent (90) of the respondents indicated that they believed the TEAM Project rationale was valid for teacher education, 5 per cent (7) indicated it was not valid, 31 per cent (47) were undecided, and 6 per cent (9) left the question blank.[5]

The second question of the series asked:

> 4. IN GENERAL, HOW DO YOU THINK THE TEAM PROJECT RATIONALE COMPARES WITH THE RATIONALE FOR TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

Since this question dealt with relative value, it along with the preceding question would give a good, overall view of the value which respondents assigned to the rationale. There were 53 per cent (81) who responded that the TEAM Project rationale was "Superior to existing rationales," 22 per cent (34) said "About equal," 3 per cent (4) indicated "Inferior to existing rationales," 15 per cent (23) were "Undecided," and 7 per cent (11) left all answers blank. Whether viewing the TEAM Project rationale in isolation or in comparison with other rationales, the respondents considered it a worthy rationale for teacher education.

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[5] In instances such as this one, where total per cent is more or less than 100 per cent, the discrepancy is caused by the normal statistical procedure of rounding off to the nearest whole per cent rather than an error on the part of the writer.

The third question regarding the rationale stated:

> 5. HAS THE TEAM PROJECT RATIONALE HAD AN INFLUENCE UPON THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION?

In response to this question, 58 per cent (89) said "Yes," 35 per cent (54) answered "No," and 6 per cent (10) did not answer.

The final question concerning the rationale queried:

> 6. DO YOU USE THE TEAM PROJECT RATIONALE FOR THE RATIONALE OF TEACHER EDUCATION AT YOUR INSTITUTION?

Six per cent (9) indicated "Yes," 47 per cent (72) responded "Partially," 42 per cent (65) said "No," and 4 per cent (7) did not answer. Questions #5 and #6 obtained the data which seems to indicate that while the TEAM Project rationale is being used and has made an impact, it is not being viewed as a panacea. It is valuable as a partial organizing center for teacher education, but is considered to have certain weaknesses by a number of respondents.

Such wide influence and utilization and high acceptance of value (eighty-one responses equals 10 per cent of the AACTE member institutions) at such an early date indicates that the rationale is being accepted rather rapidly. Whether this is due to the superior nature of the rationale or is mainly a "band-wagon" tendency by the respondents remains to be seen.

The first question pertaining to the TEAM Project organization of course work read:

> 7. DO YOU THINK THE ORGANIZATION OF COURSE WORK AS PRESENTED IN THE PROPOSAL IS SUITABLE FOR A PROGRAM OF TEACHER EDUCATION?

In regard to the concrete value of the course work organization of the TEAM Project, 51 per cent (78) answered "Yes," 8 per cent (12) responded "No," 32 per cent (49) said they were "Undecided," and 9 per cent (14) did not answer.

The second question concerning course work organization asked:

> 8. IN GENERAL, HOW DO YOU THINK THE ORGANIZATION OF COURSE WORK IN THE PROPOSAL COMPARES WITH THE ORGANIZATION OF COURSE WORK IN TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

In response to this question of relative value, 54 per cent (82) said "Superior to existing programs," 22 per cent

(33) believed "About equal," only 1 per cent (2) indicated "Inferior to existing programs," 17 per cent (26) were "Undecided," and 6 per cent (10) did not respond. The absolute and relative values placed upon the TEAM Project organization of course work is quite high for such an early survey.

The third question regarding the course work organization inquired:

> 9. HAS THE ORGANIZATION OF COURSE WORK IN THE PROPOSAL INFLUENCED THE ORGANIZATION OF COURSE WORK IN YOUR INSTITUTION?

There were 35 per cent (54) who said "Yes," 53 per cent (81) who responded "No," and 12 per cent (18) who made no response. The writer recognized too belatedly the need to include an option for answering "Partially." It would be highly possible for an institution to structure some courses, but not all, around the pattern as outlined in the TEAM Project. This option was omitted, however, and caused a gap to occur in the overall pattern of questioning in this section. These comments bear even more heavily upon question #10.

The final question concerning course work organization asked:

> 10. DO YOU USE THE COURSE WORK ORGANIZATION AS PRESENTED IN THE PROPOSAL?

Only 11 per cent (17) of the respondents said "Yes," while 75 per cent (115) answered "No," and 14 per cent (21) did not respond. It appears, therefore, that the organization of course work is one facet of the TEAM Project curriculum phase that is not having much influence or utilization. It may be, however, that institutional resistance to change can control this facet of the teacher education program more than it can the rationale, content, and multimedia usage since the organization is reflected more in the course descriptions of the college and university catalogs than these other aspects.

The third set of questions considered the content included in the TEAM Project curriculum phase. The first question in this sequence read:

> 11. DO YOU THINK THE CONTENT REFERRED TO IN THE VARIOUS SECTIONS OF THE PROPOSAL IS VALID CONTENT FOR A PROGRAM OF TEACHER EDUCATION?

In reply to this question of the concrete value of the content, 31 per cent (48) responded "Yes," 45 per cent (69) answered "Part of it," no respondent said "No," 14 per cent (21) indicated they were "Undecided," and 10 per cent (15) did not mark any answer.

To provide a further indication of the value of the content, the second question in the series, which dealt with the relative value of the content, asked:

> 12. IN GENERAL, HOW DO YOU THINK THE CONTENT REFERRED TO IN THE PROPOSAL COMPARES WITH THE CONTENT IN TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

There were 51 per cent (78) who responded "Superior to existing content," 22 per cent (33) indicated "About equal," no one answered "Inferior to existing content," 19 per cent (29) were "Undecided," and 8 per cent (13) left all answers blank. Judging from the replies to questions #11 and #12, the respondents believe that some if not all of the content suggested by the TEAM Project is an improvement over the existing content. A large majority believe that some of the TEAM Project content is at least as valuable as the traditional content of teacher education programs. The fact that no one rejected this content or indicated that they considered it inferior to traditional content gives additional emphasis to the positive reactions already mentioned. In order to give another perspective to these responses, there were 115 respondents who answered question #11 "Yes" or "Part of it" and 120 respondents who indicated on question #12 that the TEAM Project content was "Superior to existing content" or "About equal." This is 14 and 15 per cent respectively for the two questions out of the total of 810 institutions to which this questionnaire was sent and 10 per cent for both questions out of the total number of 1186 institutions engaged in teacher education.

Perhaps of greater importance than the value ascribed was the utilization already achieved. The third question in this sequence asked:

> 13. DO YOU USE THE CONTENT REFERRED TO IN THE PROPOSAL IN THE PROGRAM OF TEACHER EDUCATION AT YOUR INSTITUTION?

While only 1 per cent (1) indicated "All of it," 73 per cent (111) answered "Some of it," 15 per cent (23) said "None of it," and 12 per cent (18) left all answers blank. Thus, 112 respondents use some or all of the content proposed by the TEAM Project curriculum phase. These 112 replies represent 13 per cent of the institutions involved in this study and 9 per cent of all institutions involved in teacher education.

The fourth question in the series on content said:

> 14. IF YOU USE ALL OR SOME OF THE CONTENT, HAVE YOU INCLUDED THIS CONTENT BECAUSE OF THE INFLUENCE OF THE TEAM PROJECT MATERIALS OR WORKSHOPS?

There were 12 per cent (18) who responded "Yes," 36 per cent (55) who answered "Partially," 29 per cent (45) who said "No," and 23 per cent (35) who did not respond. Nearly half of the respondents attributed credit to the TEAM Project materials and workshops for the addition of certain elements of content. The writer wishes to note again at this juncture that all of the content in the TEAM Project was currently known at the time of the TEAM Project. The TEAM Project simply took then-existing studies and organized these studies into a new framework for the curriculum phase of teacher education. Therefore, adoption of these studies into the teacher education program at any given institution need not have occurred because of the TEAM Project. This particular question indicates the extent to which the TEAM Project has given publicity to the group of studies included in it.

The fourth series of questions dealt with multimedia presentations. This series was not structured in completely parallel form to the other three series. Moreover, in order to find answers to questions that are similar to the questions in the other series, it is necessary to use one question other than questions #15 through #18; question #20B will be used to indicate relative value. The questions in this series pertaining to absolute value were:

15. DO YOU THINK THE MULTIMEDIA APPROACH TO INSTRUCTION IS AN IMPROVEMENT OVER EXISTING METHODS OF INSTRUCTION?

16. DO YOU THINK THE TEAM PROJECT MATERIALS EFFECTIVELY LEND THEMSELVES TO THE UTILIZATION OF THE MULTIMEDIA APPROACH?

Question #15 was viewed as a prefacing question to this series. The writer considered this question as being decidedly different than asking if the respondents considered audiovisual aids as worthwhile. The distinction which the writer considers essential is that audiovisual aids can and are used in a "tacked-on" approach to teaching.

The audiovisual aids occupy portions of the time and are related to the overall topics, but are entities unto themselves. A multimedia approach uses a variety of types of aids at strategic points throughout the lesson, making each aid an integral part of the total lesson. Such an approach achieves much more cohesiveness between subparts. The writer maintains that the answer to such a question is not a forced-choice, automatic answer. There are many, he believes, who consider both audiovisual aids and a multimedia approach as a "nicety" or an expensive luxury and plaything, but not of any real benefit to improved learning. Since this questionnaire was sent mainly to people involved in teacher education, greater acceptance could have been predicted before mailing. The acceptance was greater than anticipated, however. There were 82 per cent (126) who answered "Yes," none who said "No," 10 per cent (15) who were "Undecided," and 8 per cent (12) who did not respond. The responses to this question indicate that the respondents do endorse the theory of multimedia instruction upon which the TEAM Project curriculum phase is constructed.

Question #16 relates directly to question #15. If the respondents could accept the theory of the superiority of multimedia instruction, the next logical step was to determine if they believed the TEAM Project content was amenable to multimedia instruction. In response to question #16, there were 65 per cent (99) who answered "Yes," 1 per cent (2) who said "No," 26 per cent (40) who were "Undecided," and 8 per cent (12) who left all answers blank. The respondents' judgments of the absolute value of the TEAM Project commitment to multimedia instruction was quite high.

Question #20 inquired:

> 20. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR ADVANTAGE(S) OF THE TEAM PROJECT PROPOSAL?

Alternative response B to this question was:

> It is based upon content that is more receptive to multimedia presentation than traditional content.

This question was concerned with the relative value of the TEAM Project commitment to multimedia instruction. There were 132 respondents who provided responses to the fourteen possible answers to questions #19 and #20. Of these 132, the highest number that responded to any single answer was seventy-two. Alternate #20B received the fourth highest number of responses with forty-eight. Thus, 36 per cent of the 132 respondents replied to alternate #20B. The average number replying to the alternatives on questions #19 and #20 was 38.36 (29 per cent) and the number replying to the alternatives on question #20 was 41.86 (32 per cent). Alternative B received one of the highest number of responses. It appears that the respondents place a high relative value upon the commitment of the TEAM Project curriculum phase to multimedia instruction.

The third phase of this series of questions was concerned with the utilization of multimedia instruction. This question asked:

> 17. DO YOU USE A MULTIMEDIA APPROACH IN THE INSTRUCTION OF EDUCATION COURSES AT YOUR INSTITUTION?

There were 26 per cent (40) who said "Yes," 62 per cent (95) who answered "Partially," 6 per cent (9) who replied "No," and 6 per cent (9) who did not indicate any choice.

The opinions about the fourth phase of the series, the influence of the TEAM Project upon multimedia instruction, was determined through the question:

> 18. IF YOUR ANSWER TO QUESTION #17 IS "YES," HAVE YOU BEGUN USING MULTIMEDIA INSTRUCTION BECAUSE OF THE INFLUENCE OF THE TEAM PROJECT?

In response to this question, 5 per cent (8) said "Yes," 22 per cent (33) replied "Partially," 37 per cent (56) answered "No," and another 37 per cent (56) did not reply to any answer.

To give perspective to the influence and utilization of the TEAM Project in regard to multimedia usage, the forty-one respondents who said "Yes" and "Partially" to question #18 and the 135 respondents who said "Yes" and "Partially" to question #17 represent 5 and 17 per cent respectively of the institutions receiving questionnaires and 3 and 11 per cent of the institutions engaged in teacher education.

The four questions--#3, #7, #11, and #16--which subscribed responses about the concrete value of the various facets of the TEAM Project received favorable percentages of support. There were responses of 59 per cent (90) for the rationale, 51 per cent (78) for course work organization, 76 per cent (117) for all or part of the content, and 65 per cent (99) for multimedia utilization. The responses to these four questions represented 11, 10, 14, and 12 per cent respectively of the institutions receiving a questionnaire and 8, 7, 10, and 9 per cent respectively of teacher education institutions in the United States.

The four questions about the relative value of the TEAM Project in comparison with traditional programs of teacher education were not completely parallel. A rating of "Superior to existing rationales," ". . . programs," and ". . . content" is comparable to "It is based upon content that is more receptive to multimedia presentation than traditional content." The four questions used for this cross-comparison were #4, #8, #12, and #20B. The "superior" responses for these questions were 53 per cent (81), 54 per cent (82), 51 per cent (78), and 36 per cent (48) for the rationale, organization, content, and receptiveness to multimedia respectively. The responses to these four questions about relative value represented 10, 10, 10, and 6 per cent respectively of the institutions receiving the questionnaire and 7, 7, 7, and 4 per cent respectively of all teacher education institutions in the United States.

The four questions concerned with the influence of the TEAM Project upon the rationale (#5), course work organization (#9), content (#14), and multimedia utilization (#18), received responses of "Yes" (including "Partially") 58 per cent (89), 35 per cent (54), 48 per cent (73), and 27 per cent (41) of the time respectively. These figures represent 11, 7, 9, and 5 per cent respectively of the institutions receiving the questionnaire and 8, 5, 6, and 3 per cent respectively of all teacher education institutions in the United States.

There were four questions--#6, #10, #13, and #17--that asked about the utilization of the TEAM Project rationale, TEAM Project course work organization, TEAM Project content, and a multimedia approach. The number of "Yes" (and "Partially" or "All of it" and "Some of it") responses to these questions were 53 per cent (81), 11 per cent (17), 74 per cent (112), and 88 per cent (135) respectively of the number involved for each question. These figures represent 10, 2, 14, and 17 per cent of the institutions receiving the questionnaire and 7, 1, 9, and 11 per cent of all teacher education institutions in the United States.

It is the writer's judgment, based upon the foregoing responses, that the TEAM Project curriculum phase has received favorable ratings from its public. The areas which the respondents call into question are the organization of course work and some of the content. An influence is being made and utilization is occurring at a rate exceeding the typical rate of innovation.[6]

Questions #19 and #20 provided the respondents with an opportunity to focus upon what they considered the major advantages and disadvantages of the TEAM Project. There were 132 respondents who checked one or more of the alternatives from these two questions. The responses to these two questions are provided in Table 8.

There were four alternative responses to questions #19 and #20 that received decidedly larger numbers of responses than the others. Alternative 20A, which stated that an advantage is the TEAM Project materials help

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[6] Based upon writings of Rogers, Diffusion of Innovations; Mort, "Studies in Educational Innovation. . ." in Miles (ed.), Innovation in Education; Bushnell, "Now We're Lagging Only 20 Years," The School Executive, Vol. LXXVII (Oct., 1957), pp. 61-63; and Barrington, The Introduction of Selected Educational Practices into Teachers' Colleges and Their Laboratory Schools.

TABLE 8 . RESPONSES TO QUESTIONS #19 AND #20

Responses	Questions and Alternatives
	19. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR DRAWBACK(S) OF THE TEAM PROJECT PROPOSAL?
33	A. It has application only for a certain type of classroom situation or subject matter.
24	B. It does not present alternative views of learning theory.
30	C. It needs to include definite material on lesson planning, classroom control, and other similar, practical matters.
61	D. Materials in the form of textbooks, audiovisual aids, and the like need to be produced before it can be used in most colleges for undergraduate work.
24	E. It needs to include more materials from the "social foundations" of education.
39	F. It is couched in language that is too difficult for the average undergraduate student to comprehend.
33.	G. Other (please specify).
	20. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR ADVANTAGE(S) OF THE TEAM PROJECT PROPOSAL?
72	A. Instead of "talking about education" it helps students learn "how to teach."
48	B. It is based upon content that is more receptive to multimedia presentation than traditional content.
51	C. It promises to make a significant improvement in teaching behavior.
38	D. Its use of research studies promises a superior content.
34	E. Its cohesiveness as a program promises better correlation than traditional programs.
37	F. The content contained in it will achieve a greater correlation between subject matter course work and professional course work.
13	G. Other (please specify).

students learn how to teach rather than having them talk about education, received seventy-two responses (54 per cent). The second highest number of responses (sixty-one responses representing 46 per cent of the respondents) was given to alternative 19D, the major drawback being lack of materials such as textbooks and audiovisual aids that are usable at the undergraduate level. The third highest number of responses went to the advantage in alternative 20C ("It promises to make a significant improvement in teaching behavior."). There were fifty-one responses for a total response of 39 per cent. The advantage of being more receptive to multimedia presentation than traditional content was fourth highest with forty-eight responses (36 per cent). Judging from these four responses, the TEAM Project has made a definite improvement in the purposes and content of education but there has been no provision made for disseminating these new ideas to undergraduate students.

Seven alternatives tended to cluster in terms of response frequency between thirty and thirty-nine responses. Alternative 19F, the disadvantage of being couched in language too difficult for the typical undergraduate student to understand, received thirty-nine responses (30 per cent); alternative 20D, the advantage of research studies promising superior content, received thirty-eight responses (29 per cent); alternative 20F, the advantage of correlation between subject matter course work and professional course work, received thirty-seven responses (28 per cent); alternative 20E, the advantage of a more unified professional component, received thirty-four responses (26 per cent); alternatives 19A and 19G, the disadvantages of having limited application and "other" disadvantages that the respondents wished to write in, each received thirty-three responses (25 per cent); and, alternative 19C, the disadvantage of needing more material on practical matters, received thirty responses (23 per cent). These seven alternatives may, in fact, have merit, but the responses did not seem frequent enough to warrant classifying these alternatives as established advantages or disadvantages.

Three alternatives received a decidedly lower number of responses. Alternatives 19B and 19E, the disadvantages of being applicable only to one learning theory and of needing more "social foundations" materials, received twenty-four responses each (18 per cent); alternative 20G, the "other" advantages which the respondents recognized, received thirteen responses (10 per cent).

The respondents who marked the alternative responses 19G and 20G, the "other" disadvantages and advantages, tended to focus upon several main ideas. The advantage which was cited most frequently was that it will be more fruitful than traditional programs in generating insight into learning and teaching. One disadvantage mentioned frequently was that the TEAM Project has not been developed and tested sufficiently to be used on a large scale. A second disadvantage often stated was the resistance to change by faculty attitudes, institutional forces, expense involved, and lack of prepared personnel.

Question #21 was constructed to give a rating to each of the various sections in the TEAM Project. This question asked:

> 21. IF YOU THINK THAT THE CONTENT REFERRED TO BY THE SECTIONS NAMED BELOW IS OF SUFFICIENT VALUE THAT YOU GIVE IT "TOP PRIORITY" FOR INCLUSION IN THE UNDERGRADUATE PHASE OF TEACHER EDUCATION, PLACE AN "X" IN COLUMN "A" OF THE FOLLOWING CHART. IF YOU USE THIS MATERIAL IN THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION, PLACE AN "X" IN COLUMN "B".

The results from this question are shown in Table 9. There were 110 respondents who provided responses for this question. The responses to each section ranged from a high of ninety-seven to a low of forty.

Some respondents replied that they valued a section sufficiently to consider it necessary for undergraduate teacher education material, other respondents said that they used the section in their teacher education program, and still others replied that they both considered some

TABLE 9. RESPONSES, RANK ORDER, AND DIFFERENCES IN RANK ORDER TO QUESTION #21

	Responses					Rank Order		
Name of Section	Top Priority[a] (Column A only)	Being Used[b] (Column B only)	Both (A and B)	Being Used (B) and Both	Total (A, B, and Both)	Being Used and Both	Total	Differences in Rank Order
COURSE I. ANALYTICAL STUDY OF TEACHING								
A. A Concept of Teaching (Smith)	44	11	23	34	78	14.5	9.0	5.5
B. Paradigms, Models or Schema (Maccia, Maccia, Jewett, Gage)	33	11	13	24	57	23.5	26.5	3.0
C. Concepts from Research in Teaching								
1. Interaction Analysis (Flanders)	33	14	49	63	96	2.0	2.0	0.0
2. Pedagogical Moves and Teaching Cycles (Bellack)	27	10	13	23	50	26.0	29.0	3.0
3. Logical Aspects of Teaching (Smith)	28	11	19	30	58	17.5	24.5	7.0
4. The Concept of Teaching Strategies for Cognitive Development (Taba)	32	8	33	41	73	9.0	13.5	4.5
D. Non-verbal Communication in the Classroom (Galloway, Hall)	37	10	20	30	67	17.5	17.0	.5
E. Assessment of the Social-Emotional Climate in the Classroom (Withall)	40	10	17	27	67	21.5	17.0	4.5
F. A Study of the Classroom Group as a Social System (Getzels and Thelen)	39	13	21	34	73	14.5	13.5	1.0
G. Nature of Leadership Style (Jenkins)	25	6	9	15	40	33.0	33.0	0.0
COURSE II. STRUCTURES AND USES OF KNOWLEDGE								
A. Determinants and Uses of Knowledge (Broudy, Smith, Burnett)	38	6	14	20	58	29.0	24.5	4.5
B. Logical Structure (Hickey, Newton)	29	9	7	16	45	32.0	30.0	2.0
C. Structure and Form of Knowledge (Bruner)	36	12	38	50	86	4.0	3.0	1.0
D. The Meaning of Subject Matter (Henderson)	25	7	12	19	44	30.5	31.0	.5
E. Logical Aspects of Teaching (Smith, Jenkins)	36	10	13	23	59	26.0	22.5	3.5
F. Analysis of Content and Existing Structure (Broudy, Smith, Burnett, Woodruff, Jenkins)	40	8	16	24	64	23.5	21.0	2.5

[a] This column includes only those respondents who checked Column A but did not check Column B. In actuality, the total number who checked Column A includes both the column entitled "Top Priority" and the column entitled "Both."

[b] This column includes only those respondents who checked Column B but did not check Column A. In actuality, the total number who checked Column A includes both the column entitled "Top Priority" and the column entitled "Both."

TABLE 9. (Continued)

Name of Section	Responses					Rank Order		
	Top Priority (Column A only)	Being Used (Column B only)	Both (A and B)	Being Used (B) and Both	Total (A, B, and Both	Being Used and Both	Total	Differences in Rank Order
COURSE III. CONCEPTS OF HUMAN DEVELOPMENT AND LEARNING								
A. Structure of Intellect (Guilford, Merrifield, Cox)	20	9	28	37	57	11.5	26.5	15.0
B. Cognitive Growth (Bruner, Mooney)	38	12	33	45	83	6.0	5.0	1.0
C. Concept Formation (Woodruff)	38	14	23	37	75	11.5	11.0	.5
D. Cognitive Learning Styles (Getzels, Taba, Reissman)	46	10	18	28	74	20.0	12.0	8.0
E. Inquiry Training (Suchman)	34	9	23	32	66	16.0	19.0	3.0
F. Readiness and Motivation in Learning (Broudy, Smith, Burnett, Tyler, Sears, Hilgard)	34	16	26	42	76	7.5	10.0	2.5
G. Evaluation of Learning	37	9	33	42	79	7.5	7.5	0.0
COURSE IV. DESIGNS FOR TEACHING-LEARNING								
A. Teaching Strategies (Smith, Taba)	41	8	31	39	80	10.0	6.0	4.0
B. Learning Unit Design (Woodruff)	36	8	21	29	65	19.0	20.0	1.0
C. Formation of Objectives (Bloom, taxonomy, Mager, behavioral objectives)	28	15	54	69	97	1.0	1.0	0.0
D. Instructional Systems (Lumsdaine)	30	9	12	21	51	28.0	28.0	0.0
E. Programed Instruction (Lumsdaine, Markle, Gagne)	32	13	23	36	68	13.0	15.0	2.0
COURSE V. DEMONSTRATION AND EVALUATION OF TEACHING COMPETENCIES								
A. A Review of Teaching Behaviors	40	10	17	27	67	21.5	17.0	4.5
B. Selecting and Planning Trial Experiences (Allen, micro-teaching, Cruickshank, Broadbent, simulation)	27	13	39	52	79	3.0	7.5	4.5
C. Analysis of Demonstrated Competencies (Allen, micro-teaching, Cruickshank, Broadbent, simulation)	35	15	34	49	84	5.0	4.0	1.0
D. Theories of Instruction and Teaching (Maccia, Maccia, Jewett, Ryans)	36	10	13	23	59	26.0	22.5	3.5
E. The Professional	24	5	14	19	43	30.5	32.0	1.5

sections necessary and used them. Many respondents used one column only in which to respond. While it seems logical that the respondents could value some sections highly and yet not use them, the converse seems unlikely. Other respondents would check either column A or column B, switching from the one column to the other freely, yet never checking both columns. These responses seemed highly unlikely since it would seem logical that the sections being used would, in many instances, also be considered valuable. If this were not the case, one can only wonder why such materials were not deleted from the teacher education programs of such institutions.

Because of such types of responses, the writer believes that only two figures for each section are relatively accurate. The most highly accurate column is the "total" column, indicating how many respondents checked either column A or column B or both columns. It makes relatively little difference if any whether the respondents value the section highly or use it or both; the only consideration is whether the section received a response of any kind. The second figure for each section that provides some measure of valid estimate is the total of respondents who indicated that they used the section (a response in column B) or that they both considered the section highly valuable and used it (responses in both columns A and B). While there might have been respondents who used some sections but checked only column A, this possibility appeared less likely than the possibility that a respondent valued a section highly but checked only column B. The writer concluded that while the number and percentage of respondents who used various sections may not be correct, at least the rank order of use for various sections would tend to be accurate.

There was no dichotomy on the rank-order continuum. Thus, there was no indication that the respondents viewed one group of topics being clearly superior to another group nor was there any indication that the respondents used one group of topics while ignoring another group. There were topics that were valued or were being used to a large extent whereas other topics were valued or were being used to a smaller extent; nevertheless, there were so many topics that received frequencies of response at so many intervals between the two extreme frequencies that grouping into any number of categories would have to be arbitrary rather than being dictated by tendencies to cluster. There was a tendency for the continuum reflecting use (the totals of respondents checking column B or both columns A and B) to have a larger spread than the continuum of general responses (the totals of respondents checking column A, column B, or both). This tendency helped give a higher relative valuation to those topics which were not currently being used. This tendency was accounted for by the development and dissemination of some topics and the lack of development and dissemination of others. It appeared, then, that many of the topics not then currently being used would have been used if there had been more materials and information available concerning them.

Most sections received about the same rank-order placement for general responses and responses concerning usage. There were a few topics that were given a higher general valuation than a usage response or a higher usage response than a general valuation. The sections which showed large discrepancies in rank order were: "Structure of Intellect," based upon the work of Guilford, Merrifield, and Cox,[7] ranked 11.5 for usage and 26.5 for general valuation; "Logical Aspects of Teaching," based upon the work of Smith,[8] ranked 17.5 for usage and 24.5 for general valuation; "Cognitive Learning Styles," based upon the works of Getzels,[9] Taba,[10] and Riessman,[11] ranked 20 for usage and 12 for general valuation; and "A Concept of Teaching" based upon the work of Smith[12] ranked 14.5 for usage and 9 for general valuation.

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[7] Guilford, Merrifield, and Cox, Creative Thinking in Children at the Junior High School Levels.

[8] Smith, Logical Aspects of Teaching.

There were thirteen sections which had rank-order placement above the median both for responses concerning usage and for general valuation responses. These sections and their rank orders were: "Formation of Objectives" based upon Mager[13] and Bloom,[14] ranked 1 for both usage and general valuation; "Interaction Analysis" based upon Flanders[15] ranked 2 for both usage and general valuation;

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[9] Getzels, "Creative Thinking, Problem Solving, and Instruction," Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I, Chapter 10, pp. 240-267.

[10] Taba, Levine, and Elzey, Thinking in Elementary School Children.

[11] Riessman, "The Strategy of Style," Teachers College Record, Vol. LXV (March, 1964), pp. 484-489.

[12] Smith, "A Concept of Teaching," in Smith and Ennis (eds.), Language and Concepts in Education, Chapter VI, pp. 86-101.

[13] Mager, Preparing Objectives for Programmed Instruction.

[14] Bloom (ed.), Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I: Cognitive Domain.

[15] Amidon and Flanders, The Role of the Teacher in the Classroom.

"Structure and Form of Knowledge" based upon Bruner[16] ranked 4 for usage and 3 for general valuation; "Analysis of Demonstrated Competencies" based upon Allen[17] and Cruickshank and Broadbent[18] ranked 5 for usage and 4 for general valuation; "Cognitive Growth" based upon Bruner[19] and Mooney[20] ranked 6 for usage and 5 for general valuation; "Selecting and Planning Trial Experiences" based upon Allen[21] and Cruickshank and Broadbent[22] ranked 3 for usage and 7.5 for general valuation; "Evaluation of Learning" which cites no specific sources, ranked 7.5 for both usage and general valuation; "Readiness and Motivation in Learning" based upon Broudy, Smith, and Burnett,[23] Tyler,[24] Sears and Hilgard,[25] and Bruner,[26] ranked 7.5 for usage and 10 for general valuation; "Concept Formation" based upon Woodruff[27] ranked 11.5 for usage and 11 for general valuation; "The Concept of Teaching Strategies for Cognitive Development" based upon Taba[28] ranked 9 for usage and 13.5 for general valuation; "A Study of the Classroom Group as a Social System" based upon Getzels and Thelen[29] ranked 14.5 for usage and 13.5 for general valuation; and "Programed Instruction" based upon Lumsdaine,[30] Markle,[31] and Gagne[32] ranked 13 for usage and 15 for general valuation.

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[16] Bruner, "Some Theorems on Instruction Illustrated with Reference to Mathematics," Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I, Chapter 13, pp. 306-335; Bruner, The Process of Education.

[17] Robert N. Bush and Dwight W. Allen, "Micro-Teaching: Controlled Practice in the Training of Teachers," paper prepared for AACTE Workshops in Teacher Education, 1967.

[18] Donald R. Cruickshank, "The Longacre School: A Simulated Laboratory for the Study of Teaching," paper prepared for AACTE Workshops in Teacher Education, 1967.

[19] Bruner, "Some Theorems on Instruction Illustrated with Reference to Mathematics," Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I, Chapter 13; Bruner, The Process of Education; Bruner, "The Course of Cognitive Growth," American Psychologist, Vol. XIX (Jan., 1964), pp. 1-15.

[20] Mooney, "Creation and Teaching," Bulletin of the Bureau of School Service, Vol. XXXV (1963), pp. 45-62.

[21] Bush and Allen, "Micro-Teaching: Controlled Practice in the Training of Teachers."

[22] Cruickshank, "The Longacre School: A Simulated Laboratory for the Study of Teaching."

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[23] Broudy, Smith, and Burnett, Democracy and Excellence in American Secondary Education: A Study in Curriculum Theory.

[24] Tyler, "Issues Related to Readiness to Learn," Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I, Chapter 9, pp. 210-239.

[25] Sears and Hilgard, "The Teacher's Role in the Motivation of the Learner," Theories of Learning and Instruction, Sixty-third Yearbook of NSSE, Part I, Chapter 8, pp. 182-209.

[26] Bruner, "Some Theorems on Instruction Illustrated with Reference to Mathematics," Theories of Learning and Instruction, Sixty-third Yearbook of the NSSE, Part I, Chapter 13, pp. 306-335.

[27] Woodruff, "The Use of Concepts in Teaching and Learning," Journal of Teacher Education, Vol. XV (March, 1964), pp. 81-99; Woodruff, "The Nature and Elements of the Cognitive Approach to Instruction," paper (mimeographed), May 28, 1964.

[28] Taba, Levine, and Elzey, Thinking in Elementary School Children.

One section was ranked at the median in both ratings: "Non-verbal Communication in the Classroom" based upon Galloway[33] and Hall[34] ranked 17.5 for usage and 17 for general valuation. One section which had a small discrepancy was above the median in one rating and below the median in the other rating: "Inquiry Training" based upon Suchman[35] ranked 16 for usage and 19 for general valuation.

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[29] Getzels and Thelen, "The Classroom Group as a Unique Social System," The Dynamics of Instructional Groups, Fifty-Ninth Yearbook of NSSE, Part II, Chapter 4, pp. 53-82.

[30] Lumsdaine, "Educational Technology, Programed Learning, and Instructional Science," Theories of Learning and Instruction, Sixty-third Yearbook of NSSE, Chapter 16, pp. 371-401.

[31] Markle, Eigen, and Komoski, A Programed Primer on Programing.

[32] Gagne, "The Analysis of Instructional Objectives for the Design of Instruction," Chapter II, pp. 21-65 in Robert Glaser (ed.), Teaching Machines and Programed Learning II: Data and Directions.

[33] Galloway, An Exploratory Study of Observation Procedures for Determining Teacher Non-verbal Communication, Dissertation (Gainesville: University of Florida, 1962), cited in LaGrone, Proposal, pp. 24-25 and AACTE, Professional Teacher Education, p. 38.

[34] Hall, The Silent Language.

Fourteen sections had rank-order placement below the median for responses concerning usage and for general valuation responses. These sections and their rank-orders were: "Learning Unit Design" based upon Woodruff[36] ranked 19 for usage and 20 for general valuation; "Analysis of Content and Existing Structure" based upon Broudy, Smith, and Burnett,[37] Woodruff,[38] and Jenkins [39] ranked 23.5 for usage and 21 for general valuation; "Logical Aspects of Teaching" based upon Smith[40] and Jenkins[41] and "Theories of Instruction and Teaching" based upon Maccia, Maccia, and Jewett[42] and Ryans[43] both ranked 26 for usage and 22.5 for general valuation; "Determinants and Uses of Knowledge" based upon Broudy, Smith and Burnett[44] ranked 29 for usage and 24.5 for general valuation; "Paradigms, Models or Schema" based upon Maccia, Maccia, and Jewett[45] and Gage[46] ranked 26.5 for usage and 23.5 for general valuation; "Instructional Systems" based upon Lumsdaine[47] ranked 28 both for usage and for general valuation; "Pedagogical Moves and Teaching Cycles" based upon Bellack[48] ranked 26 for usage and 29 for general valuation; "Logical Structure" by Hickey and Newton[49] ranked 32 for usage and 30 for general valuation; "The Meaning of Subject Matter" based upon Henderson[50] ranked 30.5 for usage and 31 for general valuation; "The Professional" which cites no specific sources ranked 30.5 for usage and 32 for general valuation; "Nature of Leadership Style" based upon Jenkins[51] ranked 33 for both usage and general valuation; "Assessment of the Social-Emotional Climate in the Classroom" based upon Withall[52] ranked 21.5 for usage and 17 for general valuation; and "A Review of Teaching Behaviors" which cites no specific sources ranked 21.5 for usage and 17 for general valuation.

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[35] Suchman, The Elementary School Training Program in Scientific Inquiry.

[36] Woodruff, "The Nature and Elements of the Cognitive Approach to Education,"paper (mimeographed), May 28, 1964.

[37] Broudy, Smith, and Burnett, Democracy and Excellence in American Secondary Education.

[38] Woodruff, "The Nature and Elements of the Cognitive Approach to Education," paper (mimeographed), May 28, 1964.

[39] Jenkins (ed.), The Nature of Knowledge: Implications for the Education of Teachers.

[40] Smith, Logical Aspects of Teaching.

[41] Jenkins (ed.), The Nature of Knowledge: Implications for the Education of Teachers.

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[42] Maccia, Maccia, and Jewett, Construction of Educational Theory Models.

[43] Ryans, "An Information-System Approach to Instruction with Special Reference to the Teacher," Address delivered at American Educational Research Association Annual Meeting, Chicago, Illinois, February 13, 1963.

[44] Broudy, Smith, and Burnett, Democracy and Excellence in American Secondary Education.

[45] Maccia, Maccia, and Jewett, Construction of Educational Theory Models.

[46] Nathaniel L. Gage (ed.), Handbook of Research on Teaching.

[47] Lumsdaine, "Educational Technology, Programed Learning, and Instructional Science," Theories of Learning and Instruction, Sixty-third Yearbook of NSSE, Part I, Chapter 16, pp. 371-401.

[48] Bellack, et al., The Language of the Classroom.

[49] Hickey and Newton, The Logical Basis of Teaching.

A number of interesting trends concerning the evaluation and usage of various sections appeared during the tabulation of responses to question #21. These trends become more meaningful if the first three courses are viewed by course or subsection groupings. Course I needs to be scrutinized in terms of three subsections: introductory studies, communication studies, and environmental studies. Course II consists entirely of writings concerning knowledge; Course III is composed of studies dealing with learning or psychological foundations.

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[50] Henderson, "Uses of 'Subject Matter'," in Smith and Ennis (eds.), Language and Concepts in Education.

[51] Jenkins, "Characteristics and Functions of Leadership in Instructional Groups," The Dynamics of Instructional Groups, Fifty-ninth Yearbook of the National Society for the Study of Education, Part II, Chapter 8, pp. 164-184.

[52] Withall, "The Development of a Technique for the Measurement of a Social-Emotional Climate in Classrooms," Journal of Experimental Education, Vol. XVII (March, 1949), pp. 347-361.

There were two studies in the subsection which the writer chooses to call "introductory studies." These are the topics entitled "A Concept of Teaching" and Paradigms, Models or Schema." The former received a large number of responses in column A only but much fewer in column B and both columns A and B. It appears that the respondents tend to value the materials but have not placed them into use. The latter topic seems to be used to a greater degree than it is valuated. Its use is quite low, however, with its valuation being even lower. In general, the introductory topics in the Proposal appear not to have gained much favor or use: "A Concept of Teaching" was ranked 14.5 for use and 9 for overall ranking; "Paradigms, Models or Schema" was ranked 23.5 for use and 27 for overall ranking.

The second group of studies in Course I are those six studies which are concerned with classroom communication. Five of these studies are based upon verbal interaction: "Interaction Analysis," "Pedagogical Moves and Teaching Cycles," "Logical Aspects of Teaching," "The Concept of Teaching Strategies for Cognitive Development," and "Assessment of the Social-Emotional Climate in the Classroom." The sixth study is "Non-verbal Communication in the Classroom." Of these six studies, "Interaction Analysis" is the only one which ranked in the top third of the topics for both use and total rankings. It received a ranking of 2 on both scales. The topic "The Concept of Teaching Strategies for Cognitive Development" received a ranking of 9 for use and 13 for overall, placing it very nearly at the dividing line between the top one-third and the middle one-third. "Logical Aspects of Teaching" (ranked 17.5 and 24.5) and "Assessment of the Social-Emotional Climate in the Classroom" (ranked 21.5 and 16) and "Non-verbal Communication in the Classroom" (ranked 17.5 and 16) were solidly in the middle one-third. The only topic from among the six on communication which was ranked in the bottom one-third was "Pedagogical Moves and Teaching Cycles" (ranked 26 and 29).

The third group of studies in Course I are those concerned with the environment: "A Study of the Classroom Group as a Social System" (ranked 14.5 and 13, placing it at the top of the middle one-third) and "Nature of Leadership Style" (ranked 33 in both rankings, giving it the lowest ratings of any topics). The fact that the Proposal includes only these two topics as environmental studies means that the environment is not given much emphasis to begin with. Then, the two studies which are included did not receive high evaluation or usage rankings.

Course II is composed of six topics related to "knowledge." One topic, "Structure and Form of Knowledge" (ranked 4 and 3), received ratings in the top one-third of the topics. Four topics in this course were ranked in the bottom one-third on both rankings with the sixth topic in the bottom one-third for one ranking and the bottom of the middle one-third for the other ranking: "Determinants and Uses of Knowledge," ranked 29 and 24.5; "Logical Structure," ranked 32 and 30; "The Meaning of Subject Matter," ranked 30.5 and 31; "Logical Aspects of Teaching," ranked 26 and 22.5; and, "Analysis of Content and Existing Structures," ranked 23.5 and 21. It is interesting that the only topic in this course which received a high rating is basically a "psychological foundations" type of topic.

Course III is composed of seven topics related to "learning." Three topics ranked in the top one-third: "Cognitive Growth," ranked 6 and 5; "Evaluation of Learning" ranked 7.5 in both; and "Readiness and Motivation in Learning" ranked 7.5 and 10. The topic "Concept Formation" ranked 11.5 and 11, placing it on the dividing line between the top one-third and the middle one-third. Two topics were solidly in the middle one-third: "Cognitive Learning Styles" ranked 20 and 13 and "Inquiry Training" ranked 16 and 19. The seventh topic, "Structure of

Intellect" ranked 11.5 and 27. Most of the topics in this course, then, engaged relatively good ratings.

Course IV is an integrative course composed of five topics. The first topic--"Teaching Strategies"--integrates two topics from Course I--"Logical Aspects of Teaching" and "The Concept of Teaching Strategies for Cognitive Development." "Logical Aspects. . ." was rated 17.5 and 24.5 and "The Concept of Teaching Strategies. . ." was rated 9 and 13 when used individually in Course I, but when combined in Course IV into a single topic, the combination topic of "Teaching Strategies" received a ranking of 10 and 6, placing it in the top one-third. Another topic from Course IV which ranked in the top one-third was "Formation of Objectives" receiving a rating of 1 on both scales. Two topics from Course IV placed in the middle one-third: "Learning Unit Design," 19 and 20; and "Programed Instruction, 13 and 15. The fifth topic, "Instructional Systems," received ratings of 28 and 27 placing it in the bottom one-third.

The final course, Course V, has five topics. Two of these topics are designed to involve the prospective teacher in trial situations using microteaching and simulation. These two topics--"Selecting and Planning Trial Experiences (rankings of 3 and 7.5) and "Analysis of Demonstrated Competencies" (rankings of 5 and 4)--

both were in the top one-third. One topic was in the middle one-third: "A Review of Teaching Behaviors," 21.5 and 16 rankings. Two topics were in the bottom one-third: "Theories of Teaching and Instruction" ranked 26 and 22.5; and "The Professional" ranked 30.5 and 32.

In summarizing the section of the study concerned with statistical findings gained from the questionnaire survey, the writer discovered several major trends emerging. One was that the representatives indicate that the Proposal is known of at AACTE institutions and is making a significant impact upon teacher education programs. A second finding was that some of the content and the multimedia approach of the TEAM Project was being utilized but the rationale and organization have done little more than influence thinking. A third finding was that the TEAM Project has the definite advantage of teaching prospective teachers how to teach, the disadvantage of being lacking in materials, the advantage of promising significant improvement in teacher behavior, and the advantage of being more receptive to multimedia presentation than traditional content. A fourth finding was that there are definite differences in regard to the value and utilization of various topics in the TEAM Project program.

Presentation and Evaluation of Significant Comments from the Survey

Since this study is intended in part to give direction to the development of the TEAM Project curriculum phase as well as provide an evaluation of it, the significant comments from the survey respondents are needed. It is the purpose of this section of the study to present and evaluate the significant comments. The writer used his own judgment in determining the significance of comments. Most comments were made in relation to specific questions on the questionnaire. The comments are presented in the same order as the questions appeared on the questionnaire. The comments from one question pertain, many times, to other questions as well. When this occurred, a reference to the comment's more general meaning was made where it seemed appropriate.

It did not seem desirable both to categorize and then indicate the number of comments made pertaining to each category. It did seem desirable, because of the dimension which would be added, to indicate the range of comments and give a general indication of the frequency. There were no significant comments made relative to some of the questions. The writer will present the comments to the various questions in the numerical order of the questions.

The first group of comments to be considered are those comments which were jotted randomly, usually on the first page of the questionnaire, and can be considered "general" comments. Many respondents who gave minimum responses were among those who made this type of comment. There were many respondents who indicated their regrets, but said they simply did not know about the TEAM Project at all or enough about it to be of help. Several said that their thinking had been influenced by the TEAM Project; several spoke of indirect influence which they were sure was occurring; several perceived the topics as of real benefit for additions to existing courses; several spoke of plans then underway that would utilize topics suggested by the TEAM Project; several stated that they were delaying action until other institutions have tried and proved the TEAM Project approach. At the time of the survey, it appeared that, in addition to the institutions already using the TEAM Project ideas, there were a number of institutions which were coming or about to come under the influence of the TEAM Project curriculum. One unfortunate tendency was that some persons perceived the materials simply as different content rather than sensing the different concept of education which the project presented. There were a few respondents who confused the TEAM Project with team teaching and responded accordingly.

There was but one significant comment relative to question #2. One respondent mentioned that California had such rigid statutes and state board regulations that change came slowly. This respondent stated that even minor changes in such things as course descriptions or unit values were major triumphs at state colleges and universities. Whether or not California had such rigid controls was not as important as the whole question of institutional rigidity from both internal and external restrictions.

Statements in regard to the TEAM Project rationale were made in connection with questions #3, #4, #5, and #6. One person responded that Woodruff's Cybernetic Model describes the obvious. While it may be that the ideas of sensory intake, concept formation, decision making, and trial are obvious, the writer believes that many so-called "obvious" observations and knowledges either are overlooked or are not understood. Woodruff wisely called attention to what may be obvious but has been neglected. One respondent pointed out that the TEAM Project rationale was a definite break from the academic tradition, offering a functional approach instead. The Cybernetic Model (or "Cognitive Cycle") as presented by Woodruff may be obvious in its stress upon learning having to be accomplished through a functional process. If it is, however, then the type of learning which has been promoted for many more years than should be mentioned has not been according to the so-called "obvious" procedure and has been anything but functional. Woodruff is not the first to come up with this functional approach to education; John Dewey and others of similar schools of thought who stressed an activity-centered curriculum, learning by doing, and going from the known to the unknown promoted the same basic view of education. The fact remains that we have not as yet incorporated such theories into our educational practices on any large scale.

One final comment about the rationale which warrants mention is one which stated that the TEAM Project rationale is a more flexible design which resultantly fits more real life situations. When compared with the classical, fact-memorizing view of education, the TEAM Project rationale is much more flexible. Even such methods as demonstration teaching and inductive teaching do not offer as much promise for real-life situations if the goal of the demonstration or inquiry session is the learning of facts. The simplicity of Woodruff's model and its ability to sum up all of the essential aspects of a learning situation make it a desirable approach to education.

Statements relative to the organization of course work were made in connection with questions #7, #8, #9, and #10. Two respondents expressed the belief that the organization begins with material which may be too sophisticated for the average college student. If one were to assign some of the readings mentioned in the Proposal, this may easily be true. Some of the readings themselves and the ideas contained in the readings, at least, are quite understandable and within the comprehension of the college student.

Several comments were made relative to the innovative nature of the organization. All of them conveyed the intent that while such an organization leaves something to be desired, it is an improvement over traditional organizational patterns and is most helpful because of its ability to suggest new patterns for organization. The admirable quality which several mentioned is the break from traditional research topics for organizational centers.

Statements relative to the content of the TEAM Project curriculum phase were made in conjunction with questions #11, #12, #13, and #14. The general concensus relative to the content was that the content suggested is of good quality, but that it is not sufficiently inclusive. No other expressions were given regarding content.

Questions #15, #16, #17, and #18 received comments concerning the TEAM Project's commitment to multimedia. The respondents that commented in regard to these questions indicated that the TEAM Project program is a viable program for multimedia presentation, but no more so than other programs.

Question #19 asked about the drawbacks of the Proposal. Several major ideas were expressed in the comments. One of these is that colleges are not ready for such a program. Part of this is due to the expense factor in such a major change. Another reason is the institutional and personal resistances to change. A third reason is that faculty members do not know how to handle the materials due to their newness. A second major idea is the highly theoretical nature of the program. Some believe it is excessively theoretical. A third major idea centered around content. Although alternative E referred to a need for more materials from the social foundations, a number of respondents emphasized this by writing some statement after the "other" alternative response concerning this need. A fourth major idea related to a shortage of written materials. Once again, an idea from one of the checklist alternatives--alternative D--received emphasis by being cited in the "Other" alternative.

Four other ideas worthy of note were mentioned by one or two respondents. Two respondents commented that this program also could become just more facts to cover. Two respondents stated that it does not achieve a problem-solving approach, so is not an improvement over the traditional program. One person mentioned the lack of recognition given to the importance of the learner. At least two mentioned the lack of research and development concerning the program.

The comments to question #20 expressing advantages of the Proposal were more limited. An improved organization of content, new concepts of teaching, scientific precision, dynamic use of the teaching act, and a valuable catalyst for faculty study were the reactions by one or two respondents per idea.

The only comment pertaining to question #21 stated that every topic has to receive top priority if one accepts LaGrone's basic premises. Such a statement seems quite an exaggeration, especially in view of Lawrence's[53] and LaGrone's[54] views that the Proposal was to be only one possible answer to the need for improved teacher education programs.

A number of books, films, filmstrips, videotapes, and programed materials have been developed that relate to the TEAM Project program according to responses to

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[53] Lawrence, "Foreword," pp. iii and iv in LaGrone, Proposal.

[54] LaGrone, Proposal, p. 63.

responses to question #23. The writings by Mager[55] on behavioral objectives, Bloom[56] on classification of objectives, Bruner[57] on learning theory, Amidon and Hunter[58] and Amidon and Flanders[59] on interaction analysis have been in use for some time. These present such a small segment of the total program, however, that implementation of a program similar to the TEAM Project had to await development of textbooks that included material on a number of topics. Recent works in educational psychology such as the ones by Bruner,[60] Klausmeier,[61] and DeCecco[62] have included many of the same ideas as the Proposal presents in Course III--"Concepts of Human Development and Learning." The texts by Joyce and Harootunian,[63] Raths, Panacella, and Van Ness,[64] Searles,[65] and Hyman[66] do not utilize identical readings for background as the Proposal, but they do follow an approach to teaching that is similar to Courses I--"Analytical Study of Teaching"--and IV--"Designs for Teaching-Learning." Several recent publications include much material that is similar to Course II--"Structures and Uses of Knowledge." Among these are publications by Elam,[67] and Phenix.[68] It appears from the printed materials beginning to emerge that a new generation of education textbooks is in the offing.

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[55] Mager, Preparing Instructional Objectives.

[56] Bloom, Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I: Cognitive Domain; Krathwohl, Bloom, and Masia, Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook II: Affective Domain.

[57] Bruner, The Process of Education.

[58] Edmund J. Amidon and Elizabeth Hunter, Improving Teaching: The Analysis of Classroom Verbal Interaction, New York: Holt, Rinehart and Winston, Inc., 1966.

[59] Amidon and Flanders, The Role of the Teacher in the Classroom.

[60] Jerome S. Bruner, Jacqueline J. Goodnow, and George A. Austin, A Study of Thinking, New York: John Wiley and Sons, Inc., 1956.

[61] Herbert J. Klausmeier, Learning and Human Abilities: Educational Psychology, second edition, New York: Harper and Row, 1966.

[62] John P. DeCecco, The Psychology of Learning and Instruction: Educational Psychology, Englewood Cliffs, N.J.: Prentice-Hall, 1968.

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[63] Bruce R. Joyce and Berj Harootunian, The Structure of Teaching, Chicago: Science Research Associates, 1967.

[64] James Raths, John R. Panacella, and James S. Van Ness (eds.), Studying Teaching, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967.

[65] John E. Searles, A System for Instruction, Scranton, Pa.: International Textbook Company, 1967.

[66] Ronald T. Hyman (ed.), Teaching: Vantage Points for Study, Philadelphia: J.B. Lippincott Company, 1968.

[67] Stanley M. Elam (ed.), Education and the Structure of Knowledge, Chicago: Rand McNally, 1965.

[68] Philip H. Phenix, Realms of Meaning, New York: McGraw-Hill Book Co., 1964.

Films, filmstrips, and videotapes have been produced on types of questions,[69] interaction analysis,[70] instructional objectives,[71] nonverbal behavior,[72] microteaching,[73] and simulation.[74] Some of these films and filmstrips have accompanying workbooks, programed materials, or audiotapes for applicative uses of the concepts. The types of approaches as well as the content utilized in these materials are unique because of the applicative and analytical nature that most of them share. A new generation of an approach to education seems to be emerging through these materials.

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[69] "The Logical Dimension in Teaching" and "Explaining," filmstrips by Bel-Mort Films are based upon B. Othanel Smith's twelve categories for questions.

[70] "Interaction Analysis" videotape by Ampex Corp. of Edmund J. Amidon's presentation for the AACTE TEAM Project Workshops; Studying Teacher Influence, series of five filmstrips by the Audiovisual Education Service, University of Minnesota, under the direction of Ned A. Flanders.

[71] "Educational Objectives," "Selecting Appropriate Educational Objectives," and "Establishing Performance Standards" by VIMCET (Validated Instructional Materials for the Continuing Education of Teachers) Associates prepared by W. James Popham and Eva L. Baker.

[72] "Nonverbal Behavior" videotape by Ampex Corp. of Charles Galloway's presentation for the AACTE TEAM Project Workshops.

[73] "Microteaching" videotape by Ampex Corp. of Dwight Allen's presentation for the AACTE TEAM Project Workshops.

[74] "Simulation" videotape by Ampex Corp. of Donald Cruickshank's presentation for the AACTE TEAM Project Workshops; Critical Moments in Teaching, eleven 16 mm. color films (which are open-ended to lead into class discussion and decision-making) by Holt, Rinehart and Winston, Inc.; and Donald R. Cruickshank, Frank W. Broadbent, and Roy Bubb, Teaching Problems Laboratory, thirty-one incidents (ten 16 mm. open-ended color films, twenty-one role-playing or written incidents) by Science Research Associates.

Question #22 was designed to identify discontinuities or "gaps" in content. This question asked:

> 22. WHAT ADDITIONAL TOPICS OR CONCEPTS DO YOU BELIEVE TO BE NECESSARY FOR A PROGRAM OF TEACHER EDUCATION THAT THE TEAM PROJECT DOES NOT CONTAIN?

The responses to this question and to question #24 were the most helpful guidelines that the writer received. A broader range of ideas appeared in the responses to these two questions than to all other responses combined. The responses to question #22 were frequently similar enough to allow grouping yet different enough to warrant separate mention.

One group of comments related to the "social foundations" area of education. One respondent viewed the Proposal as a return to Herbartian mechanics unless philosophical, sociological, and historical foundations were included. The historical, legal, and fiscal background of the profession were considered necessary by another person. This same person recommended the addition of a topic covering the nature of the school as an institution. One representative spoke of the need for materials about social foundations, community structure, and influence. Another respondent wrote of the need for studying the school and society with the school as a social institution and an agent of society. The legal and administrative structures of the school were suggested as a topic. Problems of accreditation were mentioned once as a topic.

A second group of comments were made concerning the "psychological foundations" area of education. Four respondents indicated the need for considering types of human development other than cognitive. One person spoke of a lack in learning process and learning theories information. Several suggested more stress upon evaluation including instruments, situations, types, role of research, purposes, and methods of evaluation. The topic on motivation needs strengthening one respondent said. Learning styles as well as language development were viewed as insufficient by two representatives.

The areas of "methods" and "curriculum" received several comments. Computer-based learning systems was one need mentioned. The problem-solving approach was viewed as neglected. A respondent stated that basic concepts and techniques of applying theories into practice should be included. Materials related to the methodologies distinctive of specific content areas was cited as a weakness by two persons. One representative spoke of classroom management, lesson planning, unit planning, and the construction of curriculum guides being necessary. Still another person wrote of experience with such curriculum materials as books, guides, and maps. Acquaintance with current trends in education such as regional and national goals, programs, and curriculum studies was what one representative cited as a need. The influence that a teacher's value system has upon classroom behavior was indicated twice as a topic shortcoming. One person mentioned the need for topics in general that include an emphasis upon the practical aspects of teaching.

There were some responses that did not seem to fit the groupings which the writer used. Instruction in preparing software was mentioned as a need for prospective teachers. A respondent stressed the need for direct experience with children in a number of topics. Topics covering communications models, sensitivity training, diagnostics, group dynamics, discussion techniques, philosophic absurdities, information theory, "systems" approach to teaching were all mentioned as needs by representatives.

Three respondents took the stated approach that no topics need to be added. They believed that the Proposal includes all that or more than can be realistically considered in a teacher education program. Two of these three emphasized that there is a problem in the development of the present topics for use. One stated that the use of such unrelated studies and writings in one program does not yield to synthesis.

The final question on the questionnaire asked:

> 24. WHAT ADDITIONAL COMMENTS DO YOU HAVE CONCERNING THE TEAM PROJECT THAT DO NOT SEEM TO FIT UNDER THE ANSWERS TO ANY OF THE ABOVE QUESTIONS?

Comments of praise and negative criticism dominated the responses to this question.

The comments of negative criticism were quite diversified. Two respondents indicated that while the program is good, adoption of it awaits a new generation of education professors who are schooled to use the new program. These respondents seemed to ignore the fact that some time, some place, some one must move out on his own if new ideas are ever to find expression. The new generation of which they speak and to which they look do not spring full-blown from nowhere. Even a minor step forward is better than standing still. Two respondents mentioned that faculty members tend to resist change, but that re-education and innovation are essential to do the job. This seemed more realistic than to say it cannot be done. Two persons mentioned that the project had a fine beginning but seemed to fizzle out. They lamented the fact that more materials were not produced and more workshops were not staged to allow for greater implementation. Two representatives stated that the project was so ambitious it discouraged them. They believed a more gradual approach would have been superior. One person said that a corresponding effort at analyzing traditional programs would achieve as much if not more. Several respondents mentioned a desire for prototype programs to be set up. The turn-over of faculty was cited as a problem in implementation: about the time a group of faculty becomes proficient, new faculty members are hired. Two respondents considered the TEAM Project too mechanistic and too highly based on the cognitive domain, one of them attributing the problems to a classical-realist philosophic base. There is a definite "realist" bias in the writings, but the interpretation of most of the writings can, in the writer's opinion, be given a pragmatic slant. As one person stated, the main value of many of the writings is in sensitizing the prospective teachers to the ideas rather than a blind, mechanistic commitment to them. It must be mentioned, however, that the topics included tend to stress the classical-realist's view that teaching is an interactive process, with the teacher needing to improve his ability to communicate; nowhere is the problem-solving approach of the experimentalist given recognition.

Several basic groups of comments of praise were received. Throughout the comments were scattered mentions of the contribution which LaGrone has made to teacher education. The Proposal was viewed as successful if it did no more than cause evaluation and study to take place. One respondent stated that the Proposal gave him a challenge. The publications and workshops were cited on several questionnaires for the impact that they made.

In summarizing this section of the study concerned with comments gained from the survey, the writer viewed several major concepts emerging as dominant. One was that the TEAM Project made a significant influence upon teacher education between the years of 1964 and 1968. This influence was largely in the form of changed content in teacher education programs. The content introduced by the TEAM Project program was based upon objective observations of the teaching process; it replaced or supplemented subjective evaluations. Its main value appeared to be the sensitivity which it stimulated. A second related, emerging concept was that faculty introspection into the content of the courses they teach was engendered. A third emerging concept was that there are definite areas of content needing inclusion in a teacher education program which the TEAM Project did not include. A fourth and final concept was that the TEAM Project program had not been sufficiently developed, as of 1968, especially in regard to understandable textual materials for undergraduates, to warrant widespread adoption.

Chapter Five provides an evaluation of the TEAM Project curriculum phase through external and internal criteria.

CHAPTER V

ANALYTIC EVALUATION

The purpose of this chapter is to provide an evaluation of the TEAM Project curriculum phase through the application of philosophic procedures and guidelines. The first portion of the chapter analyzes the TEAM Project program through external criteria--those principles of curriculum development which stem from sources outside of the TEAM Project. The second portion of the chapter analyzes the TEAM Project program through internal criteria--those principles of curriculum development which the TEAM Project had created for teacher education programs. The findings of the questionnaire as presented in Chapter Four--both the statistical findings and the significant comments--are used to direct investigation and to focus attention in the sections on internal and external criteria.

External Criteria

This section applies external criteria to the TEAM Project program in order to analyze and evaluate the program. The specific items which are considered in this section are: the soundness of philosophy; the breadth of learning experiences; the integration of theory and practice; the engendering of the need for education and teacher education; the comprehensiveness of the total program; the exclusion of non-essential knowledge; and, the self-evaluative nature of the program.[1] These various elements are considered in the order mentioned in the following pages.

Soundness of philosophy

The first question of external criteria to be answered was: "Is the teacher education program under scrutiny based upon a sound philosophy regarding the natures of man and teaching?" The answer to this question is found through scrutinizing the work of both Woodruff[2] and Smith,[3] especially as presented in the Proposal and Professional Teacher Education. Only Woodruff presents a view of the nature of man. Both discuss their particular views of the nature of teaching but Smith, particularly, is incomplete.

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[1] The specific questions which were outlined to direct the external criteria phase of this study can be found in the chapter on procedures. See Supra, p. 153. Also, the questions are restated in the following pages as each question of external criteria is applied to the TEAM Project program.

[2] Woodruff, "The Use of Concepts in Teaching and Learning," Journal of Teacher Education, Vol. XV (March, 1964), pp. 81-99; Woodruff, "Characteristics of an Effective Instructional Unit," working paper prepared for Academic Year Study, State University College, Geneseo, New York, April 14, 1966 (mimeo.); Woodruff, "Putting Subject Matter into Conceptual Form," paper prepared for TEAM Project meeting, February 6, 1964 (mimeo.); Woodruff, "The Nature and Elements of the Cognitive Approach to Instruction," paper, May 28, 1964 (mimeo.); Verduin (ed.), Conceptual Models, pp. 102-114; LaGrone, Proposal, pp. 1-8; AACTE, Professional Teacher Education, pp. 17-24.

Woodruff's portrayal of the nature of man is the view that knowledge begins with perception of the physical world. Thus, Woodruff begins with the philosophic exploration of how man learns. He does not consider whether or not man is basically a learning animal. The writer is not criticizing the work of Woodruff, since such a consideration is beyond the realm of Woodruff's writings. The writer does believe the TEAM Project should have given provision for such consideration in their publications.

There are several reasons for a teacher education program needing to define the nature of man. One is that there is a need for each teacher education program to be based upon a stated necessity for mankind to be educated. This is in keeping with the general guideline created in this study for teacher education programs that teachers be given background knowledge. Such background knowledge, it is believed, helps give understanding to prospective teachers and helps maintain pertinence in the teacher education program. This study is based upon a nature of man that says man does need to be educated. Such a view has already been satisfactorily established in the writings of Robinson,[4] Dewey,[5] and Hullfish and Smith.[6] The defense of this position is unnecessary at this time, therefore. A satisfactory statement of the nature of man and his need to be educated does need to be present in each teacher education program.

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[3] Smith, "A Concept of Teaching," in Smith and Ennis (eds.), Language and Concepts in Education, Chapter VI, pp. 86-101; LaGrone, Proposal, pp. 16-17; AACTE, Professional Teacher Education, pp. 32-33.

Consistency in a teacher education program is achieved by deciding upon the necessity for education, since by deciding first upon the necessity, the kind of learnings and the methods of teaching are implied. The need to consider the kind of learnings and the methods of teaching that mankind's nature requires is the second reason for a teacher education program needing to define the nature of man. Those teacher education programs based upon a view that mankind needs to be educated in order to adjust to society leads to a different program of studies and a different method of teaching than programs based upon the views that mankind needs to be informed, needs to be able to solve problems, or needs to reconstruct society. Without having a definite nature of man in mind, a teacher education program will not have unity. The result can easily become an unstructured, undirected group of topics lacking coherency and meaning for the prospective teacher.

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[4] James Harvey Robinson, The Mind in the Making.

[5] John Dewey, How We Think.

[6] H. Gordon Hullfish and Philip G. Smith, Reflective Thinking: The Method of Education.

A third reason for needing to explore the nature of man is that a view of man's nature leads directly to a view of the nature of learning. If man is, by nature, inquisitive and capable of discovering solutions, then this leads to a different type of educational program than if man is inclined to be averse to using his rational powers and needs to have knowledge forced upon him. Lack of specificity concerning the nature of man will cause prospective teachers to rely upon their own ungrounded beliefs resulting in only partial acceptance of the philosophic system of the teacher education program undertaken. The writer is not recommending a monolithic approach to teacher education; he is speaking out against an unexamined view of education by prospective teachers since he feels an unexamined view of education is the most undesirable possibility.

These philosophic considerations were not included as part of the TEAM Project curriculum either as an implicit or an explicit part of the program. The ontological explanation of man and of education are not part of the consideration of the TEAM Project program. The primary ontological question which is considered is one which asks about the nature of teaching. Smith asks, in effect, what teaching is. After rejecting a number of answers, he concludes that: "Teaching is a system of actions intended to induce learning."[7] Smith's rejection of existing definitions of teaching is based upon his view that these definitions commit us to particular methods of instruction. The writer recognizes the danger of premature commitment to a given methodology. Of equal or greater danger, it would appear, is the failure to establish the need of education in general or education of any type.

A superior introduction to teacher education than that provided by the TEAM Project program would begin with a philosophic explanation of the need for learning. It would continue with an open-ended approach to teaching such as Smith suggests, but Smith's concept of teaching would not provide the starting point. By beginning with Smith's writings, ontological questions which should be given prior consideration are eliminated. The lack of an ontological consideration of education disallows any basis for axiological decisions to be made.

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[7] Smith, "A Concept of Teaching," in Smith and Ennis (eds.), Language and Concepts in Teaching, p. 88; LaGrone, Proposal, pp. 16-17; AACTE, Professional Teacher Education, pp. 32-33.

Woodruff's "Cognitive Cycle" provides a firm and adequate understanding of the basic metaphysical question, "How does man know?" Both the perceptual and rational powers of man are given consideration in the TEAM Project program. The rational abilities, not only of remembering but of being creative and of evaluating, are explored in some depth. The placement of these metaphysical topics seems undesirable, however, since the analytical studies precede them. If a survey of a minimum of metaphysical topics preceded the analytical studies of Flanders, Bellack, Smith, and Taba as contained in Course I, Section C, the analytical studies would probably have more meaning and worth to the prospective teacher. Woodruff's conception of learning requires the teacher to play an active role, but a role of "guiding" rather than "telling." The writer's viewpoint--metaphysical topics should precede analytical studies--seems even more appropriate, since Woodruff's role of the teacher--guiding rather than telling--provides the prospective teacher with a reason to study and use these analytical approaches.[8]

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[8] Woodruff, "The Use of Concepts in Teaching and Learning," Journal of Teacher Education, Vol. XV (March, 1964), pp. 81-99; Woodruff, "Characteristics of an Effective Instructional Unit," working paper prepared

The TEAM Project program excludes all topics pertaining to the axiological consideration of how relative worth of subject matter is decided. Woodruff stresses the need for teachers to be selective of subject matter in their planning. In the section entitled "Formation of Objectives," the need for different types of learning is stressed.[9] What is missing is ontological information upon which axiological decisions may be made. The knowledge that decisions must be made is insufficient unless some basis for making decisions is created.

Suchman's study[10] provides more of an ontological base perhaps than any other topic in the Proposal.

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for Academic Year Study, State University College, Geneseo, New York, April 14, 1966 (mimeo.); Woodruff, "Putting Subject Matter Into Conceptual Form," paper prepared for TEAM Project meeting, February 6, 1964 (mimeo.); Woodruff, "The Nature and Elements of the Cognitive Approach to Instruction," paper, May 28, 1964 (mimeo.); Verduin (ed.), Conceptual Models, pp. 102-114; LaGrone, Proposal, pp. 1-8; AACTE, Professional Teacher Education, pp. 17-24.

[9] LaGrone, Proposal, pp. 50-51; AACTE, Professional Teacher Education, pp. 58-59.

[10] See section on Inquiry Training, supra, pp. 93-95. Suchman, "Inquiry Training in the Elementary School," The Science Teacher, Vol. XXVII (November, 1960), pp. 42-47; Suchman, The Elementary School Training Program in Scientific Inquiry (U.S. Office of Education, Title VII Project No. 216), Urbana, Illinois: University of Illinois, January, 1964; Suchman, Developing Inquiry; Verduin, Conceptual Models, pp. 95-101; LaGrone, Proposal, pp. 45-46; AACTE, Professional Teacher Education, p. 55.

Suchman does indicate that mankind is capable of choosing among alternatives. Since ontology is merely implied rather than being focused upon, with the inquiry method being the primary objective, this study does not adequately present the nature of man. While the terminology of philosophy need not be used in presenting a view of the nature of man to prospective teachers, the focus of the topic needs to be explicit in the materials being used to present the topic.

Perhaps the reason that there is no ontological base for the TEAM Project program is that the formulators of the TEAM Project curriculum unstatedly reject the need for an ontology in a teacher education program. According to the Introductory Report, teacher education should be based upon competency improvement of teacher behaviors.[11] Since teaching is a process which can be objectively analyzed, improvement of teaching can be decided upon by objectively determining what type of teacher behavior in a given circumstance brings about an increase in a given type of student learning. Such a view of teacher education could well be a rejection of the need for ontology, viewing such metaphysical questions as "How does man learn?" and

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[11] Supra, pp. 36-37. LaGrone and Wedberg, Introductory Report, pp. 3-5 especially.

"How does man learn best?" as the better starting point for teacher education.

LaGrone and Wedberg[12] indicate that they were not rejecting the need for ontology but that they considered the development of a philosophic background for teacher education to be beyond the scope of the TEAM Project. They state:

> The TEAM Project will not attempt to develop a theory of teaching, but the notions that must be used for the development of behavioral objectives should be in harmony with the proposed structure of the theories which are being developed by others.

Because of this statement, the writer was obliged to respect the right of the TEAM Project formulators to forego ontological considerations, but he does believe the users of the TEAM Project program should be cautioned of the need for them to construct a philosophic framework within which elements of the TEAM Project program may be utilized. The need of the program to be considered as a working paper for faculty study groups rather than as a completed program is intensified by the need for a philosophic background.

If teaching is considered as an occupation which requires that the teacher be a decision-maker or a judge of personality, then a need exists for a philosophic base to be created. Upon this philosophic base, the teacher will be enabled to create his teaching strategies; without such a base, the teacher will revert to being a technician. The TEAM Project program was intended to eliminate the dichotomy between theory and practice or between talking about teaching and learning how to teach.[13] In order to eliminate the dichotomy, analytical studies were added to bridge the gap. Unfortunately, when "step two" was added to connect "step one" (theory) and "step three" (practice), part of "step one" was eliminated.

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[12] LaGrone and Wedberg, Introductory Report, p. 4.

The writer reached the conclusion that the TEAM Project curriculum is not based upon a sound philosophy regarding the natures of man and teaching. The reasons for this conclusion stem from lack of consideration of certain basic philosophic questions. The consideration of ontological questions is superficial and partial. Metaphysics is handled adequately but is misplaced. Axiology, like ontology, is handled in a superficial and partial way. With the addition of topics concerning the nature of man, the nature of education, and the nature of valuing, plus the repositioning of introductory metaphysics, the TEAM Project would have a sound philosophy of teacher education. Without a doubt, as the TEAM Project publications have stated, faculties need to review the content from the discipline of philosophy.[14]

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[13] LaGrone, Proposal, pp. 62-63; AACTE, Professional Teacher Education, p. 73.

Breadth of learning experiences

The second question of external criteria asked: "Does the program being considered include background knowledge and does it foster decision-making ability?" Responding with a simple, one-word answer to this question was insufficient. Instead, a qualified "Yes" with the qualifications being stated was needed. Also, the question itself must be viewed in several subparts rather than as a single question.

Background knowledge, as presented in the chapter on procedures,[15] refers to those terms and concepts which represent the accumulated expressions and relationships used and conceived by other individuals from present and previous generations. Without a doubt, there is background material. The background material which is included in the TEAM Project program is different from the content of traditional programs of teacher education. The terminology used is different and the resultant relationships are different. To say there is background material is to say nothing about the sufficiency and appropriateness of it, since the sufficiency and appropriateness is the consideration of later questions. The topics in Courses I, II, and III, plus much of Course IV presents background material. An affirmative answer must be given to this portion of the question with answers to the value aspects being reserved until later.

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[14] LaGrone, Proposal, pp. 14-15; AACTE, Professional Teacher Education, pp. 31-32.

[15] Supra, pp. 141-145.

Decision-making ability refers to the choosing among alternative relationships.[16] This choosing among alternatives will be based upon the alternative relationships that were presented through the background materials or upon additional relationships created by the prospective teacher as his creative powers were stimulated through the coverage of background materials. Such decision making is not the spontaneous or automatic result of receiving background material, but occurs only as the instructor fosters it through planned class activities which require decision-making ability to be utilized. An important consideration is the extent to which a teacher education program utilizes the background knowledge it presents in decision-making activities.

The TEAM Project program does foster decision-making ability. Especially is this true in the topics from

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[16] *Supra*, p. 142.

Course V entitled "Selecting and Planning Trial Experiences" and "Analysis of Demonstrated Competencies."[17] The utilization of decision-making ability by teacher education students in conjunction with each or most topics would seem advantageous. The ways in which application of the content from the various topics can be achieved in hypothetical situations within the topic has not been mentioned in the Proposal or Professional Teacher Education. In fact, even though Woodruff's "Cognitive Cycle" calls for decision-making and trial or doing, these third and fourth phases of his cycle seem to be relegated to Course V, by and large. The writer would recommend that a greater stress be placed either in the introduction to the TEAM Project program or in the discussion of the various topics themselves to the creation of applicative situations so that decision-making ability is fostered. The coverage of many of the topics as they are presented in the Proposal and Professional Teacher Education would, as one respondent indicated, lead simply to new content for memorization. Once again, the purpose of the program to provide a working paper for faculty study groups is highly evident. While decision-making ability is fostered, the indirectness and lack of examples causes the program to be weak in this particular phase.

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[17] Supra, pp. 113-115. LaGrone, Proposal, pp. 56-57; AACTE, Professional Teacher Education, pp. 63-64.

Integration of theory and practice

The third question of external criteria queried: "Are the prospective teachers in this program involved in the learning of both cognitive subject matter and technical skills in an integrated fashion so that the prospective teachers have the theoretical knowledge to decide when to use the particular skills?" This question is more appropriately considered from three standpoints: 1) "Is there cognitive subject matter to be learned?" 2) "Are there technical skills to be learned?" 3) "Are the technical skills and the cognitive subject matter learned in an integrated fashion?" The remainder of this section considers the original question from these three standpoints.

Every topic but two from the five courses and thirty-three topics can be considered basically cognitive subject matter. The two topics which are not cognitive subject matter are "Selecting and Planning Trial Experiences" and "Analysis of Demonstrated Competencies." These two topics are "practicum" situations--problem solving, simulation, or student teaching situations--and are more appropriately considered psycho-motor learning situations. While there are skills involved in many of the topics, affective learnings in all of the topics, and cognitive learnings in the practicum topics, yet the emphasis in the two practicum topics is skills and the emphasis in the remaining thirty-one topics is cognitive learning.

Technical skills are somewhat neglected. Other than the two practicum topics, there are no topics that include skills frequently used by teachers. Even for topics based upon such studies as Flanders' Interaction Analysis System or other analysis systems, the TEAM Project program does not stress the development of technical skills but stresses the cognitive aspects of the studies. The concepts which analysis systems offer are intended only to be part of the prospective teacher's conceptual scheme.[18] To have such concepts in one's conceptual scheme does not require skill in analyzing, apparently, according to the thinking of the TEAM Project formulators. A return to Herbartian mechanics, as one respondent feared, seems an impossibility due to the lack of a regimented system in organizing content.[19] The writer would be more inclined to agree with those respondents who stated the need for topics that centered around concepts and techniques of applying theories into practice, especially topics concerned with classroom management, lesson planning, unit planning, and the construction of curriculum guides.[20] The old saw about the most practical thing being a good theory has much to commend it, but prospective teachers must be prepared for survival during those first crucial years, also. Very little is offered in the form of technical skills in the TEAM Project. Much needs to be done to change the highly theoretical and cognitive subject matter of the TEAM Project program into the technical skills of teaching.

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[18] LaGrone, Proposal, especially pp. 20 and 21; AACTE, Professional Teacher Education, especially pp. 35 and 36.

[19] *Supra*, p. 219.

As the preceding discussion on technical skills pointed out, technical skills are almost totally lacking except in the two practicum topics. While these two topics are based upon the cognitive knowledges of the preceding twenty-nine topics, they do not use technical skills from the preceding topics since the preceding topics do not have technical skills contained in them, for the most part. Most topics do more "talking about" skills than "learning how to use" skills. For instance, the topic "Logical Aspects of Teaching" is a presentation of types of questions. Completely lacking is any discussion of the order in which these questions need to be used or how to decide when to use the various types of questions. An integration of cognitive subject matter and technical skills is not achieved, then, by the topics in the TEAM Project program.

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[20] Supra, p. 221.

In summarizing this section, it needs to be said that an integration of theory and practice is not achieved to the extent desirable in a teacher education program. Theory is presented and practice is included, but an integration of the two is not optimally achieved. The main reason for integration not being achieved is that the cognitive subject matter does not connect to technical skills so that the theoretical aspects of the program govern when and how to use the technical skills. The TEAM Project program has content that is too susceptible to becoming, simply, different content to be memorized.

The engendering of the need for education and teacher education

Question number four asked: "Does the program provide an introduction to the need for education and teacher education?" The writer presents three reasons for teacher education programs requiring such an introduction. The first is that there is a need to create direction and meaning for the prospective teachers as they undertake course work in the professional component. The prospective teachers have a "common knowledge" understanding of the need for education and teacher education. Such an understanding may be one step better than the average man in the street would have. Even this is not sufficient, however. A teacher education program needs to provide a deep enough understanding of the need for education and teacher education that the prospective teachers become and remain well aware of the benefits of being in the teacher education program. A second reason for an introduction is that the ideas considered should provide the prospective teachers with useful cognitive knowledge as they engage in decision making. If they understand why education is needed, they can judge their own classes to decide if they are providing the right types of educational experiences. The third reason for an introduction is that it forces those of us engaged in teacher education to establish a rationale for the courses we teach. Rather than giving an excuse, we need to give a reason for the courses which we offer.

To an extent, the TEAM Project program does indicate the need for education and teacher education. In the opening topic, the study by Smith presents teaching as an ongoing, interactive process in which the teacher is attempting to induce learning.[21] Smith points out that teaching cannot be considered as the one-way process from teacher to student that it is too often viewed as being.

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[21] Smith, "A Concept of Teaching," in Smith and Ennis (eds.), Concepts in Education, Chapter VI, pp. 86-101.

He explicitly indicates that the teacher has a great decision-making responsibility, an intellectual task of the highest magnitude calling for perception, judgment, and action.

Two things are lacking in the introduction provided by the TEAM Project program. One is a definite commitment to the idea that a person can learn to be a better teacher. The idea almost predominates that while teaching calls for a high degree of intelligence, any intelligent person will perceive what is involved in good teaching. The need for teaching is made explicit by Smith, but the need for teacher education is nearly ignored. Secondly, the need for education seems to be assumed. While it may be that we can assume the need for education, we cannot assume that prospective teachers know the basis for such an assumption--that mankind seems better off being educated if he is to cope with life--or that they have ever considered what is meant by "education." Both a rationale for and explanation of education seems to be warranted in a teacher education program, but the TEAM Project program does not offer such.

The comprehensiveness of the total program

The fifth question in the section on external criteria was: "Does the program include knowledges and skills from the various areas indicated in Figure #5?"[22] The TEAM Project offered the "Model for the Dynamics of Teaching"[23] as an outline of the concepts needed by the prospective teacher. This model is used as an internal-criteria means of judging the TEAM Project. Rather than judge the program by comparing the topics with the schematic framework of Figure #5, a different procedure is offered by the writer to avoid unnecessary duplication. The writer proposes that Figure #5 be compared with Figure #1 to determine if Figure #1, "Model for the Dynamics of Teaching" (hereafter referred to as the "Model"), neglects some areas that Figure #5, "A Schematic Framework for Selecting Background Knowledge for the Professional Component" (hereafter referred to as the "Framework"), indicates as being needed. Only the completeness of the "Model for the Dynamics of Teaching" will be evaluated at this time, then, with the completeness of the topics in the TEAM Project program being considered in the subsection under Internal Criteria.

While the areas suggested in the writer's "Framework" are not worded in the same terminology as the TEAM Project "Model," there are definite areas of correspondence.

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[22] Figure #5 is located supra, p. 149.

[23] This model is reproduced in this study as Figure #1, supra, p. 38.

The writer's "Framework" includes the one dimension entitled Influences Upon Education. This would correspond generally with the TEAM Project "Model"'s Environment-Source Variables. The "Model" does not mention the historical, philosophical (except "Aims") or economic (unless this is what is meant by "Resources-Aids") aspects of education. The TEAM Project publications mention that faculty study groups should review content from "philosophy, sociology, psychology, history, etc." as well as other major areas.[24] Moreover, these are areas which the questionnaire respondents mentioned frequently in their comments.[25] It might be noted, however, that the need for more materials from the "social foundations" was not chosen on the checklist as a major drawback frequently.[26] It would appear from the questionnaire responses that the "social foundations" are not viewed as highly necessary.

The "Framework" includes a dimension entitled Individuals and Groups Affecting and Affected by the Educational System. This dimension somewhat corresponds with the various individuals and groups mentioned in the outer ring of the end surface of the "Model"--Teacher, Pupil, Class-Group, Community. The "Framework" seems to offer no significant additional perspectives from this dimension.

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[24] LaGrone, Proposal, pp. 14-15; AACTE, Professional Teacher Education, pp. 31-32.

[25] Supra, pp. 214, 219-220.

[26] Supra, Table #8, p. 188.

The third dimension of the "Framework" is entitled Decision Areas for the Teacher. It corresponds to the outer, vertical surface of the Model where the "Teacher Acts" are located. This dimension seems to offer no significant additional perspectives, either.

The exclusion of non-essential knowledge

Question six in the section on external criteria asked: "Does the program include areas which would appear not to be needed or useful to the prospective teacher?" The writer believes that the general ideas concerning needed knowledges as indicated in the "Model for the Dynamics of Teaching" and in the "Simple Instructional System"[27] are all necessary; he would, however, question the choice of references in the various topics and the emphasis which some references might assume in the presentation of the ideas.

The use of Bellack's "Pedagogical Moves and Teaching Cycles"[28] and Withall's "Assessment of the Social-Emotional

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[27] These two figures are located supra, pp. 38 and 41 respectively.

[28] Bellack, et al., The Language of the Classroom.

Climate in the Classroom"[29] in addition to Flanders' "Interaction Analysis"[30] tends to be superfluous activity. There tend to be very few ideas included in Bellack and Withall's studies that Flanders does not cover. If Bellack and Withall were repositioned so that their studies preceded Flanders, there could be some advantage to the continued use of them, since they would provide an excellent introduction to Flanders' more sophisticated study.

"The Nature of Leadership Style" based upon Jenkins' work[31] does not convey what needs to be communicated to teachers. This is indicated in the questionnaire responses. The feeling of the writer in regard to Jenkins' study is that it is too much a rote memory type of topic that serves no decision-making or self-analysis purpose.

The writer believes that prospective teachers need a course similar to the general description for Course II--Structures and Uses of Knowledge--but he would propose that the topics in Course II be nearly rewritten before they are used in a teacher education program. Part of the general description for Course II states:[32]

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[29] Withall, "The Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," Journal of Experimental Education, Vol. XVII (March, 1949), pp. 347-361.

[30] Amidon and Flanders, The Role of the Teacher in the Classroom.

[31] David H. Jenkins, "Characteristics and Functions of Leadership in Instructional Groups," The Dynamics of Instructional Groups, Fifty-ninth Yearbook of the National Society for the Study of Education, Part II (1960), Chapter VII, pp. 164-184.

> Behaviorally, the prospective teacher should be able to analyze content, put elements of the knowledge in instructional form, and assess certain logical operations performed in teaching the content.

This description is not implemented adequately. It has been indicated previously[33] that the questionnaire respondents rated the topics in Course II, with the exception of Bruner's "Structure and Form of Knowledge," in the lowest one-third of the topics. These topics need to be scrutinized individually to discover where they fail to accomplish the intended objectives as outlined in the description.

The first topic in Course II, entitled "Determinants and Uses of Knowledge" and based upon the writing of Broudy, Smith, and Burnett,[34] is a means of classifying the "uses of knowledge or school learnings."[35] The problem with the classifications[36] proposed in this topic is that they are of little value except for tabular research purposes by a cloistered academician. Broudy, Smith, and Burnett consider the intellectual operations which a student must utilize, whereas the need is for a classification that stresses the ways in which the knowledge will be used by students. A more appropriate classification scheme might be one that uses such terms as citizenship, vocational, social adjustment, scientific understanding, cultural sophistication, attitudinal, and practical. The approach of Broudy, Smith, and Burnett is too narrow in scope and outlook. This particular topic in its present form is not needed or useful; in an altered form it would be highly useful and needed.

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[32] LaGrone, Proposal, p. 31; AACTE, Professional Teacher Education, p. 42.

[33] Supra, p. 206.

[34] Broudy, Smith, and Burnett, Democracy and Excellence in American Secondary Education, Chapter III, pp. 43-60.

[35] LaGrone, Proposal, p. 30; AACTE, Professional Teacher Education, p. 43.

The second topic in Course II, "Logical Structure," is not needed or useful in its present state of development, either. The problem with the work of Hickey and Newton[37] is its highly technical nature. The discreteness which must be used by the teacher so that the processes of induction, deduction, analysis, and synthesis are not mixed is an important concept to attain. The prospective teacher must be introduced to the meanings of induction, deduction, analysis, and synthesis before he can comprehend the meaning of Hickey and Newton's Logic Space. If such material is to be used in a teacher education program, introductory topics must precede this topic or verbal memorization will result.

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[36] For a description of the classifications, the reader is referred to supra, pp. 72-74.

[37] Hickey and Newton, The Logical Basis of Teaching: I. The Effect of Subconcept Sequence on Learning.

"The Meaning of Subject Matter" is the fourth topic in Course II. Henderson's[38] explanation of "subject matter" and his classification scheme for "cognitive knowledge" into statements, prescriptions, and value statements that are singular or general[39] is of doubtful value for prospective teachers. This topic, like the first topic in Course II, uses classifications that are not sufficiently practical for public school teachers. The drawback in this and the first topics as they are presently constructed is that the stress remains upon the classification of content for intellectual purposes. Such a classification becomes a paramount concern whereas student behavioral change is the goal of teaching according to the Simple Instructional System.[40] If behavioral change is desired, subject matter should be given a meaning and a classification scheme that focuses upon student behaviors or types of learning. A way of describing learnings in terms of student use or comprehension seems more desirable for this topic especially since the logical operations previously described by Smith[41] seem to provide a similar but more complex classification than Henderson formulates so that classification by content rather than student learning seems redundant.

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[38] Henderson, "Uses of 'Subject Matter'," Chapter III, pp. 43-58, in Smith and Ennis (eds.), Language and Concepts in Education.

[39] Supra, pp. 77-79.

[40] Supra, p. 41; AACTE, Professional Teacher Education, p. 66.

The topic entitled "Logical Aspects of Teaching" is the fifth topic in Course II. Based upon the works of Smith[42] and Jenkins,[43] this topic is one that has mixed elements of necessary and unnecessary content. The discussion of logical procedures as portrayed in Smith's writings should be covered in conjunction with the discussion of Smith's question categories in Course I in the topic "Logical Aspects of Teaching." Such ideas as selectivity of content, the dynamic nature of content, methods of inquiry, structure of content, and logical procedures as presented in Jenkins are quite useful as guides in lesson planning.

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[41] Smith, Logical Aspects of Teaching.

[42] Ibid.

[43] Jenkins (ed.), The Nature of Knowledge.

The last topic in Course II, "Analysis of Content and Existing Structures," fared slightly better in the questionnaire ratings than did topics one, two, four, and five. Moreover, it seems to offer more to the prospective teacher than did the other four topics previously mentioned. Broudy, Smith, and Burnett are more mundane when they write about concepts[44] than when they write about the uses of knowledge.[45] Woodruff[46] offers a description of curriculum building consisting of selecting content and organizing it for learning. This organization of content must be based upon the dynamic structure and the inquiry methods of the discipline as discussed in Jenkins.[47] While the integration of ideas from three sources is not a simple thing to accomplish, the resultant knowledge which would be achieved in this topic would be quite worthwhile. Thus, the reason for low ratings seems to be due to the lack of simplified materials with which to explain the topic. This topic includes much material concerning concepts of content which should do much toward improving a teacher's preparation of subject matter for classroom presentation.

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[44] Broudy, Smith, and Burnett, Democracy and Excellence in American Secondary Education, Chapters 8 and 9, pp. 121-138 and 139-156.

[45] Ibid., Chapter 3, pp. 43-60.

[46] Woodruff, "The Nature and Elements of the Cognitive Approach to Instruction," unpublished paper (mimeographed), May 28, 1964.

[47] Jenkins (ed.), The Nature of Knowledge.

"Instructional Systems," the fourth topic in Course IV, would appear to be misplaced. Lumsdaine[48] offers the type of simplified explanation of the teaching-learning situation which might be better placed so that it could be used in conjunction with the first topic in the first course. The reference by Smith[49] already contained in the first topic of the Proposal presents teaching as a process whereas Lumsdaine presents the elements that comprise teaching. The relocation of this topic would make it more desirable.

"Theories of Instruction and Learning," the fourth topic in Course V, and "Paradigms, Models or Schema for Teaching," the second topic in Course I were both given low ratings by the questionnaire respondents. These two topics are considered jointly since they both utilize the writing of Maccia, Maccia, and Jewett,[50] and both are concerned with virtually the same purpose--the construction of theories and models of teaching. In addition to the one common reading, "Theories of Instruction and Learning" includes a reading from Ryans[51] and "Paradigms, Models or Schema for Teaching" makes reference to Gage.[52] One problem that these two topics share is that none of the writings include information about the mechanics of model construction or a simplified explanation of why model construction or theory construction is useful to the prospective teacher. Moreover, the explanation for "Theories of Instruction and Learning" is limited to thirty-one words[53] with no reference to the preceding topic being offered and no description of the references included. For such an abstruse topic, more information seems to be needed. It may be that low ratings were given because of failure to understand the topics. The references are somewhat advanced for use at the undergraduate level, also. Better development is needed before these topics will be useful.

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[48] Lumsdaine, "Educational Technology, Programed Learning, and Instructional Science," Chapter XVI, pp. 371-401 (esp. pp. 371-382, 392-401), Theories of Learning and Instruction, Sixty-third Yearbook of the National Society for the Study of Education, Part I (1964).

[49] Smith, "A Concept of Teaching," in Smith and Ennis (eds.), Language and Concepts in Education.

[50] Maccia, Maccia, and Jewett, Construction of Educational Theory Models.

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[51] Ryans, "A Model of Instruction Based on Information System Concepts," pp. 36-61 in MacDonald and Leeper (eds.), Theories of Instruction.

[52] Gage, "Paradigms for Research on Teaching," Chapter III (pp. 94-141), in Gage (ed.), Handbook of Research on Teaching.

[53] LaGrone, Proposal, p. 58; AACTE, Professional Teacher Education, p. 64.

The last topic in the program, "The Professional," has an explanation that is quite nebulous. Perhaps this coupled with no reference being cited is the cause for low ratings. It is quite difficult to assess this topic since there is insufficient information provided[54] to accomplish an assessment. The writer would tend to believe that such a topic should be included in the professional component, but inclusion would depend highly upon the content and activities included.

The self-evaluative nature of the program

Because teaching is an occupation calling for decision-making ability, and since each situation is different, there must be material by which the teacher can evaluate his teaching performance or decisions to determine if he performed or planned in accordance with the requirements of the situation. In light of this, question #7 from the procedures for external criteria asked: "Does the program provide knowledges which could be used by the prospective teacher to perform self-evaluation during his teaching in order to discover areas that need improvement?" It is to this question that attention is now directed.

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[54] LaGrone, Proposal, p. 58; AACTE, Professional Teacher Education, p. 65.

There are some areas which provide means of categorizing certain aspects of teacher behavior but not of evaluating. Flanders' system of interaction analysis, Bellack's system of pedagogical moves and cycles, Smith's logical operations, Taba's teaching strategies, and Bloom's taxonomy of objectives are examples. A tool for categorizing is not a tool for evaluating, though. For instance, Flanders' system does not provide any information concerning when to use certain patterns of verbal interaction or how to decide when to use different patterns. In similar manner, Bloom does not indicate what level of objectives should be used at any particular time or what kind of balance should be achieved. The writer believes that ability to categorize does not imply ability to evaluate. While agreement on the "oughts" of education has not been reached, lack of agreement does not call for ignoring the bases by which men choose.

There are some areas which provide no means even for categorizing. Getzels and Thelen indicate that a teacher must understand the goals of the student, particularly when the student comes from a different social-class standing than the one which creates the goals of the school. Yet there is no information given in the TEAM Project program relative to prevailing goals which teachers can expect to encounter nor is there information given regarding how a teacher is to achieve congruity or how a teacher should teach these groups differently. A means of categorizing knowledge so that the uses of the knowledge could be clearly seen in relation to the students' lives is needed. In addition to categorizing according to uses of knowledge, a means of deciding when each use should be stressed is needed. A system for categorizing and selecting types of teaching methods--memorization, discovery, problem-solving, etc.--is needed so that the teacher can see one more facet of the teaching-learning process.

The greatest need seems to be an overview of the various decisions facing a teacher so that an integration of sorts is provided. This overview would need to be presented as tentative. It would help by showing the need for concepts to be attained by the prospective teacher about such things as content, learning activities, purposes of content, communication, and teaching methods. The need for concepts about these elements, the interrelationships that exist among them, the ways in which they can be categorized, and the procedures in choosing among the various categories would be aided by an early overview. In short, such an approach would help integrate.

In summarizing this section on the self-evaluative nature of the program, it can be said that there are decided shortcomings of the TEAM Project program. First of all, there are areas in which there are no category systems to provide for arrangement of alternatives. Secondly, there is no provision for a prospective teacher to be educated in performing evaluation of alternatives. Thirdly, the various teacher activities are not interrelated so that the prospective teacher can gain an overall view of the role of the teacher and can see the various facets of teaching in their interrelationships.

Internal Criteria

This section applies internal criteria to the TEAM Project program in order to analyze and evaluate the program. The specific items which are considered in this section are: the soundness of the theoretical foundations; the use of an organizing center; content based upon teacher behaviors; performance stressed over memory; use of the natural dynamics of teaching in organizing; multimedia used for perceptual input; use of Woodruff's "Cognitive Cycle;" creation of new teaching models; inclusion of designated essential areas; and, organization according to the prescribed framework. Each of these items stemmed from criteria originally created by the TEAM Project staff as they outlined the requirements for a teacher education program. Because of the criteria originating from within the TEAM Project, the term "internal criteria" has been employed.

The soundness of the theoretical foundation

The first question of internal criteria inquired: "Does it have a sound theoretical foundation?" This question stems from the beliefs stated by LaGrone.[55] One of these is the assumption of the TEAM Project staff that teaching can be improved through cognitive development of certain components of the teaching-learning process. A second belief is that most other programs are not built upon any integrating theoretical framework. The question that needs to be answered is whether or not the objective of developing teacher behaviors constitutes a sound theoretical framework; there is a definite theoretical framework for the TEAM Project program, but there remains a question about its soundness.

Part of the determination of soundness must be based upon an inspection of the types of teacher behaviors that are included. The TEAM Project program focuses upon teaching as a process of verbal interaction in which one individual attempts to induce learning in another.

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[55] LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 219-229.

As a result, the way in which teaching is improved is to improve the communicative aspects of teacher behavior. While there are concepts of content, learning, and environment included, every one of these concepts is structured by the prevailing philosophy of the concepts of communication which emphasize the methodology of verbal interaction that one would find in a classroom where classroom discussion is the predominant way of teaching. Prospective science teachers have need to learn also of laboratory and demonstration methods; the special areas of physical education, music, and art do not lend themselves to classroom discussion; only the literature portion of language arts fits the mold created by the TEAM Project program; and, those social studies classes concerned with the development of reflective thought will not lend themselves to such a mechanistic view of teaching, either.

Teaching does not consist entirely of behaviors. There are attitudes and values which teachers need to have or need to consider. The TEAM Project neglects these facets, as Stratemeyer pointed out.[56]

Moreover, the behaviors which the TEAM Project program wishes to change do not occur in an institutional or intellectual vacuum. The writer believes it is unfortunate that some attention is not given to various views concerning the purposes of the school, the ways man knows, the bases of valuing, the social aspects of teaching, and the humanitarian function of the teacher. Once again, the mechanistic tendency of the TEAM Project program becomes too pronounced. There are background knowledges needed that are non-cognitive which need to be included.

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[56] Florence B. Stratemeyer, "Perspective on Action in Teacher Education," Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), p. 34.

Perhaps the best way to summarize this subsection is to say that the TEAM Project program has a segment of a sound theoretical background. What is offered would be sound if it were not presented as a total answer. Left out are methods other than the classroom discussion method, teacher behaviors other than cognitive behaviors, and knowledges which place teaching into a dynamic environment.

The use of an organizing center

Question two in the section on internal criteria asked: "Does it have an organizing center?" This question originates from LaGrone's charge that traditional programs "disassociate interrelated knowledge" because of their failure to have an organizing center.[57]

The TEAM Project program does cite an organizing center. The organizing center which is stated is the teaching-learning situation. If something relates to needed teacher behaviors, it supposedly is valid content; if the subject matter is related to the broad field of education, but is not necessary in order for a teacher to teach, it is not valid content.[58] In addition, the "Model for the Dynamics of Teaching"[59] and the model of a "Simple Instructional System"[60] provide graphic illustrations of the organizing center promoted by the TEAM Project program. This subsection must be answered affirmatively.

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[57] LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), p. 220.

[58] Ibid., p. 221; LaGrone, Proposal, p. 11; AACTE, Professional Teacher Education, p. 3.

[59] Supra, p. 38; AACTE, Professional Teacher Education, p. 6.

[60] Supra, p. 41; AACTE, Professional Teacher Education, p. 66.

Content based upon teacher behaviors

Closely related although not entirely parallel to the preceding question is question three of internal criteria which queried: "Is the content used in the program based upon teacher behaviors so that the content has application?" This question arose from the commitment of the TEAM Project to the construction of topics concerning teacher behaviors.[61] This question will have to consider each topic in the TEAM Project separately. The writer interprets content to have applicative use if it provides an understanding of teacher behavior or if it gives a teacher some particular skill or analytic device to use in teaching.

Course I is entitled "Analytical Study of Teaching." The topic "A Concept of Teaching" provides an understanding that teaching cannot be viewed as a one-way process; the teacher must recognize the active role which the students must assume. "Paradigms, Models or Schema for Teaching" should give the understanding of teaching consisting of a number of variables in an interrelationship; the problem is that this topic does not provide a knowledge of the construction of models, or of the theory underlying model construction, providing only an ultra-sophisticated view of the topic. "Interaction Analysis," "Pedagogical Moves," "Logical Aspects of Teaching," and "The Concept of Teaching Strategies for Cognitive Development" present understandings of verbal teacher behavior that can be developed into skills to use in categorizing verbal behavior that has been recorded. "Nonverbal Communication in the Classroom" provides an understanding of nonverbal teacher behavior that can also be developed into a skill to use in categorizing nonverbal behavior that has been videotape recorded. "Assessment of the Social-Emotional Climate in the Classroom," because of the duplication by "Interaction Analysis," provides little understanding or skill. "A Study of the Classroom Group as a Social System" provides an understanding of the teacher's task in achieving student acceptance of the school's objectives, but this understanding is beclouded with academic terminology. The topic "Nature of Leadership Style" supposedly gives an understanding of the types and functions of leadership in which the teacher engages, but this topic falls short of its expectations.

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[61] LaGrone and Wedberg, Introductory Report, p. 2; Lawrence, "Foreword," in LaGrone, Proposal, p. iii; AACTE, Professional Teacher Education, pp. 3-5.

Course II, "Structures and Uses of Knowledge," began with the topic "Determinants and Uses of Knowledge." This topic was supposed to provide an understanding of the ways in which knowledge is used by students, although it simply provides new academic categories which are of little or no use to prospective teachers. "Logical Structure" does present an understanding of the need to use only one logical process at a time in teaching but it does not present an understanding of the processes of logic. This concept could be used to analyze teaching effectiveness by listening to a recording in order to determine if the rules of logical sequence were followed. "Structure and Form of Knowledge" gives an understanding of the ways in which knowledge can be represented and its "power" and "economy." These understandings can be quite valuable as a teacher plans how he will present the knowledge of the particular subject area under consideration as well as what he will present. "The Meaning of Subject Matter" does provide understanding, but the writer does not believe the understanding is pertinent to teacher behavior. "Logical Aspects of Teaching" imparts an understanding of preparing content so that it is coherent, interesting, and meaningful. "Analysis of Content and Existing Structures" presents an understanding of the structure of knowledge that is dynamic and logical so that teachers realize content should not be viewed as an assemblage of facts.

Course III is labeled "Concepts of Human Development and Learning." The first topic helps prospective teachers understand that the "Structure of Intellect" is such that students can perform other mental operations than those of cognition and memory. The categories so designated can be used to analyze the teacher's educational program. "Cognitive Growth" relates content to learning by providing the understanding that modes of representation structure content as well as learning sequence. An analytic dimension is imparted, also. "Concept Formation" presents understandings and analytic framework concerning certain cognitive learnings that lifts the prospective teacher's insight into learning beyond the usual level of factual recall. "Cognitive Learning Styles" makes an abortive promise of an understanding of individual differences. Materials which are more suitable are needed for this topic. "Inquiry Training" is an additional topic to impart an understanding of learning beyond the factual recall level. Learning is seen as a structured, teachable process with some semblance of an analytic framework being present. "Readiness and Motivation in Learning" includes valuable understandings of the roles of readiness and motivation of the learners for effective teaching. "Evaluation of Learning" was not developed at all in the TEAM Project materials. While the title suggests valuable understandings that would probably be agreed upon by most educators, any evaluation at present would be invalid.

"Designs for Teaching-Learning" is the title of Course IV. This entire course is supposedly devoted to the refinement, extension, and integration of previous topics. Some of these topics might well have been located immediately after the previous topics so that integration becomes an ongoing process rather than an entity unto itself. "Teaching Strategies," gives an understanding of the ways in which previous understandings support, contribute to, and interrelate with one another. This topic provides an integration of the various topics concerned with verbal behavior. This topic would have been strengthened, in the writer's opinion, by being located along with the topics on verbal behavior. "Learning Unit Design" is well placed since it integrates content, learning, and communication. The understanding which it gives of teaching consisting of the organization of all previous topics is a much needed understanding of all prospective teachers. "Formation of Objectives" might be better located in Course II, "Structures and Uses of Knowledge." This topic gives an understanding of the ways in which content must be viewed in order for it to be organized for valid instructional efforts, so that the purpose, presentation, and evaluation are integrated. Moreover, an understanding of the mental processes through which content can undergo scrutiny in the classroom is reached.

In addition, analytic frameworks for judging the curricular integration and types of mental processes are created. "Instructional Systems," like "Learning Unit Design," is a topic that integrates content, learning, and communication. The reference cited in it is complex reading, but the ideas are sufficiently elementary that this topic could provide an overview in Course I of the entire program. "Programed Instruction" is a topic that gives an understanding of learning principles from programing that also pertain to classroom teaching of cognitive recall items.

Course V, "Demonstration and Evaluation of Teaching Competencies," both integrates previous learnings and provides trial experiences for them. The first topic, "A Review of Teacher Behaviors," groups terms from all of the previous topics into categories in order to aid in the creation of interrelationships. No unique understandings, skills, or analytic devices are contained. "Selecting and Planning Trial Experiences" is a topic that focuses upon the use of previously-acquired understandings, skills, and analytic devices. "Analysis of Demonstrated Competencies" is a continuation of the last-mentioned topic, so the same comments apply. "Theories of Instruction and Teaching" provides the understanding that teachers need to construct their own models or theories.

If this topic were integrated with the topics "Learning Unit Design" and "Instructional Systems" it might be more pertinent and appropriate for undergraduate consideration. "The Professional" is a topic about which so little is said that one cannot help but wonder why it is included. There are some very important understandings that it could impart, but these are not mentioned in the topic statement. It might well be that this topic was planned to show that the professional component must dovetail with full-time teaching.

In summarizing this subsection, it must be said that most of the topics are related to teacher behaviors. Only a few seem to be completely inappropriate; several need to be reconsidered because of their placement or because of the references cited; and, several are appropriate as presently constructed.

Performance stressed over memory

Woodruff's ideas about concept formation emphasize that learning needs to lead to performance rather than leading to verbal memorized information. The TEAM Project committed itself to the concept formation type of learning process rather than memorized learnings for the project materials.[62] Based upon this commitment, question four of internal criteria stated: "Is performance rather than memory stressed in the program?" In addition to the use of Woodruff's ideas, the TEAM Project commitment to the changing of teacher behaviors implies a stress upon performance rather than memory.

There is the danger that the TEAM Project program has only created a new group of materials to be memorized rather than presenting a new approach to teacher education. The method of presentation, amount of time spent per topic, types of related learning activities, and integration with previous topics depends upon the particular instructor teaching the class more than any other single factor. There is still the method in which the materials are written, however, that will have a great impact upon the instructor. The topics in the Proposal and Professional Teacher Education do not stress methods by which the materials can be translated into performance situations. Instead, the materials stress cognitive knowledge which most easily becomes verbal memorized knowledge.

It must be noted that both the Proposal and Professional Teacher Education have lengthy introductory statements which emphasize the need to present the various topics in such a manner that performance situations are created.[63] The writer doubts the sufficiency of the introductory statements to accomplish the designed purpose. He would suggest that at least some of the topics need to have examples of ways in which these topics could be presented. If certain types of performance are desired, then these types should be mentioned in the materials; if cognitive learnings are desired, then these learnings should be listed. The TEAM Project materials mention materials, not types of performance.

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[62] LaGrone, Proposal, pp. 4-6; AACTE, Professional Teacher Education, pp. 17-20.

Use of the natural dynamics of teaching in organizing

A major complaint set forth by the TEAM Project writings[64] is that existing programs of teacher education do not effectively utilize the "power" (a la Bruner) of the domain of knowledge. This is attributed to use of subdivisions that are supposedly oriented toward research and specialization rather than organizing knowledge around the teaching-learning situation. Based upon this complaint, the question was formulated which asked: "Is the organization of content into courses based upon the use of the natural dynamics of the teaching situation rather than upon the research categories of traditional programs of teacher education?" The answer to this question will decide whether the TEAM Project does effectively utilize the "power" of the knowledge within the domain of education.

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[63] LaGrone, Proposal, pp. 1-14; AACTE, Professional Teacher Education, pp. 16-31.

[64] LaGrone, Proposal, pp. 8-15, 59; AACTE, Professional Teacher Education, p. 70; LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 220-221.

The approach which was followed by the TEAM Project staff was to include only that knowledge which is needed by the prospective teacher. The view which they have of most courses in education is that these courses provide an overview of the entire subject. Thus, educational psychology includes material from nearly every topic within the field of research and specialization which we term educational psychology. This same tendency is found in history of education, philosophy of education, educational administration, and so on. Through judicious selection of materials from among the various subdivisions of education, the TEAM Project staff hoped to create a professional component that would be more beneficial and better accepted by prospective teachers. The overarching guideline for the selection of appropriate materials was that they relate to the teaching-learning situation.[65]

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[65] LaGrone, Proposal, pp. 8-9; LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), pp. 220-221.

The writer considers the approach used in the TEAM Project materials to be a courageous one, but one that is not sufficiently far-reaching. Taba writes of curriculum development as involving both the selection and the organization of content and learning experiences.[66] We have already noted that the TEAM Project program made changes in content while neglecting learning experiences; in this subsection, it is appropriate to note that the selection of content was promoted while organization was practically neglected. Had both selection and organization been given proper attention, a more effective use of the power of the discipline might have been given. In actuality, the attempt to utilize the teaching-learning situation as an organizing center was incomplete.

The method of grouping topics was to group together all of the topics from a common subdivision. Thus, all of the topics related to educational psychology were placed together into the course "Concepts of Human Growth and Development." In like manner, concepts from methods and curriculum were organized into "Analytical Study of Teaching" and "Designs for Teaching-Learning," from social foundations of education into "Structures and Uses of Knowledge," and from field experience situations (student teaching, observation, and practicum courses) into "Demonstration and Evaluation of Teaching Competencies," While more power might be released by having a purposeful selection of topics rather than following the traditional method of surveying all of the material, as much could be accomplished by retaining the traditional course titles while being more selective of the content.

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[66] Hilda Taba, Curriculum Development: Theory and Practice.

There are more advantageous methods of restructuring the professional component. The writer would like to offer one method by way of suggestion. It would be to use the teaching-learning situation as the overarching organizing center while using the end surfaces and the teaching acts from the outer surface of the cylinder of the "Model for the Dynamics of Teaching" (Figure 1, supra, p. 38) for course organizing centers. In outline form, such a program would look like the following: (Topics preceded by an asterisk are not part of the TEAM Project program.)

Course I. Scenario for Education (or Concepts of Educational Environment)

*A. A Rationale for Education
B. A Concept of Teaching
*C. The Uses of Knowledge
*D. Bases for Choosing
E. A Study of the Classroom Group as a Social System
*F. Group Dynamics
*G. Logical Processes
*H. The School in the Social Setting
I. The Professional

Course II. Designing the Learning Experience

A. Learning Unit Design
B. Formation of Objectives
C. Instructional Systems
D. Logical Structure
E. Structure and Form of Knowledge
F. Analysis of Content and Existing Structures

Course III. Creating the Learning Environment

A. Structure of Intellect
B. Cognitive Growth
C. Logical Aspects of Teaching (from Course II of the _Proposal_)
D. Readiness and Motivation in Learning
E. Inquiry Training
F. Cognitive Learning Styles
*G. The Nature of Childhood and Adolescence

Course IV. Directing Teaching-Learning Activities

A. Interaction Analysis
B. Logical Aspects of Teaching (from Course I of the _Proposal_)
C. The Concept of Teaching Strategies for Cognitive Development
D. Nonverbal Communication in the Classroom
E. Concept Formation
F. Programed Instruction
*G. Better Lecturing
*H. Activity Methods of Instruction
*I. Audiovisual Knowledges
J. Teaching Strategies

Course V. Evaluating the Teaching-Learning Experience

A. Theories of Instruction and Teaching
B. Evaluation of Learning
C. Selecting and Planning Trial Experiences
*D. Presentation of Trial Experiences
E. Analysis of Demonstrated Competencies
F. A Review of Teaching Behaviors

While this is but one illustration, it serves the purpose of indicating the writer's view of organizing the knowledge needed by the prospective teacher into an order that utilizes the natural dynamics of the teaching situation. Course I in the illustration provides background; Course II is concerned with topics related to planning the teaching-learning experience; Course III is composed of those topics of content and learning which relate to making learning more possible and learning more desirable; Course IV is arranged around the presentation aspects of teaching; and, Course V is concerned with the teacher evaluating his own learnings and the learnings of the students. One bonus benefit to such an arrangement is that each course could utilize a type of built-in learning activity: Course I could utilize observation sessions to give perspective to the topics; Course II could perhaps have prospective teachers create educational materials under the direction of full-time teachers; Course III could involve prospective teachers in individual help sessions in which learnings could be applied in a highly controlled setting; Course IV could require the prospective teacher to observe and analyze the communicative patterns of full-time teachers; and, Course V would integrate the knowledges of learning, content, and communication which were gained relative to designing, developing, directing, and evaluating. Courses III and IV could well be reversed in order to utilize the maximum interest factor of prospective teachers.

In conclusing this subsection, it can be said that the natural dynamics of the teaching situation are not utilized in the TEAM Project program. In fact, the research categories of traditional programs have not been departed from appreciably. The TEAM Project program does not make each course a survey course of the particular subdivision of education as traditional programs do, but topics are still grouped according to similarity of content. The use of teacher activities as presented in the "Model for the Dynamics of Teaching" would be far superior for organizational purposes.

Multimedia used for perceptual input

One objective of the TEAM Project telling what was to be developed stated: "A set of guidelines for the development of instructional units which appropriately utilize the new media for teaching the professional curriculum in teacher education."[67] Shortly after the inception of the Project, it was decided to develop instructional units which would utilize the new media.[68] Because of this commitment, a logical question to ask about these units or topics was the sixth question of internal criteria which inquired: "Is multimedia utilized in order to provide perceptual input?" Somewhat implicit in the objective is that traditional units do not utilize, or do not utilize appropriately, the new media. To a degree, the answer to this sixth question must indicate if multimedia is more amenable to the TEAM Project units than it is to traditional program units.

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[67] Lawrence, "Foreword," in LaGrone, Proposal, p. iii; LaGrone and Wedberg, Introductory Report, p. 2.

[68] Lawrence, "Foreword," in LaGrone, Proposal, p. iv; LaGrone, Proposal, p. 1.

The use of media is referred to in the introductory pages of the Proposal and Professional Teacher Education but not in the presentation of topics. The materials for each topic are given in outine or précis form. No attention is given to the ways in which media might be utilized to present each specific topic. The brief statements in the introductory pages are too general to be of help. Regardless of the amount of general statements which emphasize the use of media in presenting topics, it is difficult for such ideas as are presented in the TEAM Project materials about the use of media and concept formation to be envisioned and utilized without more specific suggestions than are provided. The original objective may have been accomplished, but its purpose remains unmet, in the writer's opinion. Only through specific suggestions concerning the use of media within each topic can it be said that instructional units were created which effectively utilize the new media. As they are presently constructed, the units emphasize the knowledges which could quite easily become verbal memorized information.

It is not apparent how the TEAM Project units are more amenable to multimedia presentation than are the units of traditional programs of teacher education. While the TEAM Project has a different type of materials--objective, inductive, and normative rather than subjective, deductive, and judgmental--than the traditional programs, it is quite possible for many of the topics from traditional programs to be presented through multimedia and to result in concept formation. It is the writer's opinion that multimedia is equally amenable to the traditional programs and the TEAM Project program. While traditional programs perhaps have not had their mateirals adapted to multimedia presentation, these materials are adaptable and should be appropriately reconciled with the new technology.

Use of Woodruff's "Cognitive Cycle"

A great deal of emphasis in the introductory pages of the Proposal[69] and Professional Teacher Education[70] is given to Woodruff's "Cognitive Cycle." The stand was taken that only when there are the elements of perceptual input, concept formation, decision making, and trial or doing in a learning situation can the learning situation be considered profitable (with the exception of learnings which depend upon memory or neuro-motor coordination.) Because of the commitment to such an approach to learning, it seems reasonable to assume that the TEAM Project materials would be written in a fashion that would illustrate the method which is espoused therein. Therefore, question seven of internal criteria asked: "Is Woodruff's Cybernetic Model utilized in the construction of topics for presentation?"

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[69] LaGrone, Proposal, pp. 1-6.

[70] AACTE, Professional Teacher Education, pp. 17-24.

The TEAM Project program materials were not constructed in such a way that the four stages of the "Cognitive Cycle" were emphasized in the description of each topic. Had each unit been created in such a way that the cognitive cycle was illustrated, a way of presenting the topic through a perceptual input process would have been described. This would very likely involve the use of media. After the type of media presentation was described, the particular facts and ideas relevant to the concept proposed for the topic would be delineated so that the instructor could gain a concept about why the particular media was suggested. A third part of the description should have been a suggested decision which would be appropriate for the given topic. The fourth and final portion would be the mention of an appropriate trial experience. Had Woodruff's Cybernetic Model been utilized, a product superior to the curriculum which resulted would have been the outcome.

Creation of new teaching models

One criticism which was leveled at Conant's internship program by the TEAM Project was that it would simply perpetuate existing patterns of teaching rather than promoting new patterns to be developed.[71] The belief implicitly stated in the TEAM Project program is that teacher education programs must stimulate the prospective teacher to create new patterns of teaching. Stemming from this viewpoint came the eighth question of internal criteria which asked: "Does the program allow for the construction of new models of teaching rather than call for imitation of existing models as an internship would occasion?"

While some perpetuation seems likely, there does appear to be sufficient encouragement of change so that new patterns would emerge. The writer is especially concerned that the method of class discussion is too highly stressed in the TEAM Project program. As a result, the prospective teacher is somewhat misled into thinking that the supreme method of teaching is a well-constructed discussion session. It is interesting to note that with such stress upon the use of media in the teacher education program, there is no topic on the importance of, philosophy behind, construction of, or techniques of using audiovisual aids. The writer contends that proper usage of audiovisual aids is not automatic. Moreover, he contends that an introduction to numerous methods is highly desirable. Especially is knowledge of the method most useful to one's field of specialization--social studies, science, music, physical education--desirable so that the prospective teacher can perform with traditional methods sufficiently well to feel secure about experimenting and to be willing to create new patterns of teaching. By knowing of several methods of instruction, a greater tendency toward creating new patterns of teaching would be likely to occur.

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[71] LaGrone, "Teaching--Craft or Intellectual Process?" Action for Improvement of Teacher Education, Eighteenth Yearbook of the AACTE (1965), p. 222.

Inclusion of designated essential areas

The "Model for the Dynamics of Teaching" was intended to provide an analysis of teaching from which concepts which prospective teachers need would be identified. Using this model as a base point, the ninth question of internal criteria was formulated. This question queried: "Does the program incorporate those areas which are suggested in the 'Model for the Dynamics of Teaching' (Figure 1, supra, p. 38)?"

It must be mentioned that it may be there should not be content included for some of the areas included in the model. The dictates of time necessitates that selectivity occur. Nevertheless, there may be some areas that appear to be of great need but have been eliminated because of a different bias of the TEAM Project staff than the writer holds. The writer has probably focused upon those areas which he believes to be most exemplary and of greatest need. The areas which do not appear as crucial or are not used as exemplary by the writer are merely mentioned as being by-passed in the TEAM Project program. The reader may choose to consider these areas as of equal, greater, or lesser importance and may create his own criticism of them. A certain degree of selectivity will depend upon the judgment of the formulator of any program. The formulators must judge upon such factors as the nature of the learners, the intended use, the nature of knowledge, and the nature of the situation. Because of the many factors influencing a teacher education program, the writer would emphasize that some areas of the model might easily receive little or no emphasis while others would receive a high degree of emphasis. This is to be expected.

Beginning with the top end-surface of the cylinder, the majority of the segments contained under the heading "Pupil-Source Variables" have been neglected. The fact that students are different is mentioned in the topics "Cognitive Learning Styles," "Readiness and Motivation in Learning," and "A Study of the Classroom Group as a Social System." Nowhere in the various topics is there presented a description of the child or adolescent with his typical likes, dislikes, tendencies, growth, changes, feelings, emotions, or habits. What mention is made of the student is a mechanistic portrayal of an apparently unfeeling organism. Somewhere in the teacher education program, the prospective teacher needs to be presented with a humanized view of the student.

A second portion of the outer ring of the top end-surface is entitled "Teacher-Source Variables." Only the two topics "Nature of Leadership Style" and "The Professional" would apply to this variable. Moreover, these two topics do not seem to apply to the various segments named in the model. Perhaps the evasive description of the topic "The Professional" will provide sufficient latitude to meet the needs of completing this variable.

The third portion of the outer ring is called "Environment-Source Variables." A number of shortcomings appear through surveillance of this variable. The first is that the segment termed "Community" is given attention only indirectly through the topic "A Study of the Classroom Group as a Social System." The community is referred to as being an influence upon the school and the student. Just as the student is dehumanized, so is the community desocialized in the TEAM Project program. The community needs to be seen not only as dynamic but warm, not only having form but having substance. The community is not capable of springing full-blown out of nothing. There must be the historical, economic, legal, and sociological aspects of it. These are ignored or considered unimportant, apparently, by the TEAM Project staff.

"Administration" is another segment within the "Environment-Source" portion that is deleted. The hierarchical nature of the school as an institution and the methods of control which the public has, both latent and manifest, legal and extra-legal, are knowledges which could help the teacher in his role. Some of the knowledges from the area of administration are important from the standpoint of survival of the new teacher. As with all of the topics in teacher education, care would need to be taken so that only those learnings which are needed by the prospective teacher would be included in the professional component. Some portions of the segment of administration could very wisely be included.

Three segments--"Aims," "Content," and "Methods-Techniques" seem misplaced under "Environment-Source Variable." The model as originally depicted[72] contained a fourth segment entitled "Curriculum-Content Source." Such an additional portion seems quite advantageous.

The segment called "Aims" is not adequately developed in the TEAM Project, as was discussed earlier.[73] By way of review, the topic "Determinants and Uses of Knowledge" is too academic to be useful to the prospective teacher in the classification of purposes or aims of education. A classification scheme based upon the traditional terms used in describing the aims of education is more desirable and useful. A topic that adequately handled the aims would give the prospective teacher a better perspective of the purposes of schooling so that the prospective teacher, in turn, could be more effective in his teaching. In short, the TEAM Project has failed to create a background for the prospective teacher so that he can see some reason and direction to teaching. While the TEAM Project criticizes traditional programs for emphasizing the foundations of education to such an extent that theory is never related to practice, the TEAM Project makes as much of an error in failing to create any foundation.

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[72] LaGrone and Wedberg, Introductory Report, p. 12.

[73] Supra, pp. 227-237, 247-249.

It has previously been mentioned that most of the topics from Course II "Structures and Uses of Knowledge," are inadequate.[74] It was also determined that rather than utilizing a number of methods and techniques of teaching, one method (or one type of methods) was unduly emphasized.[75] No more needs to be said concerning the two segments, "Content" and "Methods-Techniques," at the present time.

The final consideration that needs to be made of the top end surface is that of "Educational Experiences." These experiences, according to the model, are cognitive, affective, and psychomotor. Investigation of the topics involved in the TEAM Project program fails to disclose any topics that focus directly upon a change in the attitudes or values of the prospective teacher. Moreover, due to the impersonality of topics that deal with the student and society, it is highly unlikely that attitudinal change will occur from these topics. An overemphasis upon the cognitive is present in the TEAM Project materials.

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[74] _Supra_, pp. 206, 249-255.

[75] _Supra_, pp. 283-284.

The top layer of the outer surface of the cylinder is entitled "Teachers Design Specific Learning Experiences." Such a title suggests that the prospective teacher will be introduced to a knowledge of curriculum development. The promise contained in the title never completely materializes, however. There are numerous topics that present portions of the type of knowledges which are needed for successful curriculum development: stating of objectives, presenting content, organizing content, and choosing the type of learning. The topic "Instructional Systems" even mentions a number of elements which are contained in a total curriculum, but these are not organized into a coherent, logical pattern such as is found in Taba.[76]

Taba's conception of curriculum development provides a flow pattern and a sufficiently complex and complete system that teachers can be aided in comprehending curriculum development. The bases of the curriculum are seen as the nature of the learner, the nature of society, and the nature of knowledge. These bases are interpreted through the philosophical and psychological inclinations of the teacher, being used to formulate the objectives. Based upon the objectives, the teacher selects and organizes the content and learning experiences. In accordance with the objectives, content, and learning experiences, the evaluative activities are constructed. Since Taba is concerned with curriculum development rather than the entire teaching process, she does not include the presentation of content and learning activities. Evaluation provides feedback which is used to reconstruct the objectives, and the selection and organization of content and learning experiences. Taba's conception is especially useful when organized into a diagram such as the one developed by Klohr,[77] depicted in Figure 6. The TEAM Project lacks an integrated view of the curriculum such as the one presented by Taba and depicted by Klohr. The curriculum should not be viewed in an inflexible manner. Yet the presentation of a model for the curriculum, with prospective teachers being cautioned that there are many other conceptions which can and should be developed, is most helpful.

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[76] Taba, Curriculum Development: Theory and Practice.

One of the subareas listed under the title "Teachers Design Specific Learning Experiences" is that of "Formulating Objectives." This particular subarea is not adequately treated. While the prospective teacher learns to state

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[77] Class notes of the writer from Education 701, Fundamentals of Curriculum, taught by Paul R. Klohr, Autumn Quarter, The Ohio State University.

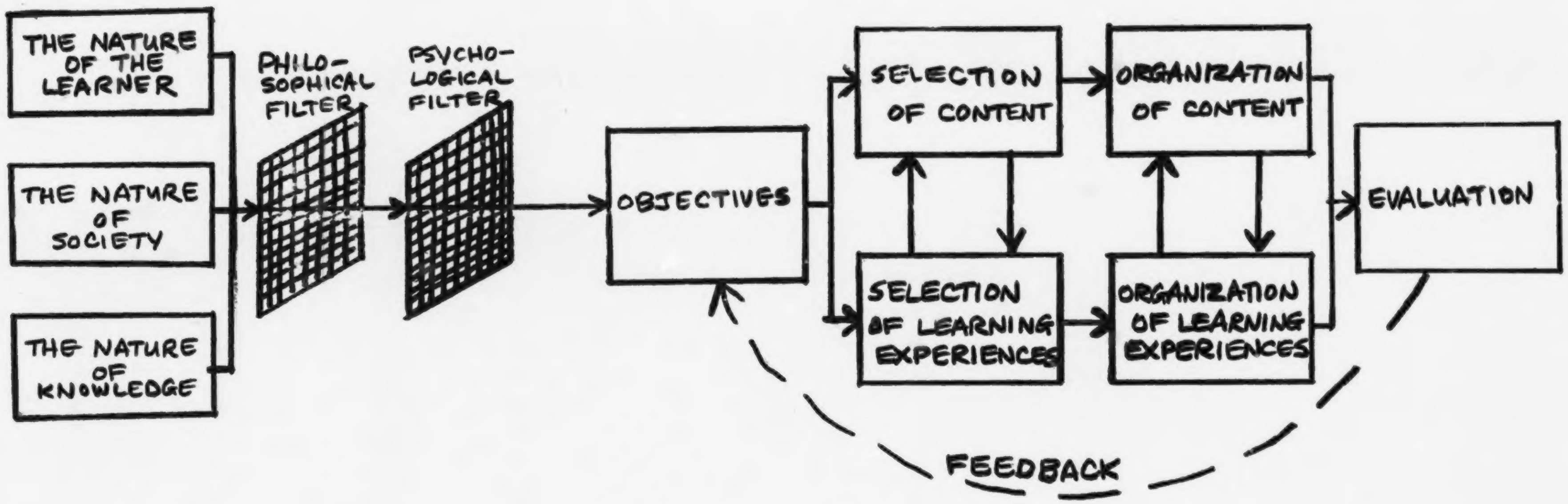
THE NATURE OF THE LEARNER
THE NATURE OF SOCIETY
THE NATURE OF KNOWLEDGE
PHILO-SOPHICAL FILTER
PSYCHO-LOGICAL FILTER
OBJECTIVES
SELECTION OF CONTENT
SELECTION OF LEARNING EXPERIENCES
ORGANIZATION OF CONTENT
ORGANIZATION OF LEARNING EXPERIENCES
EVALUATION
FEEDBACK

FIGURE 6.-- THE DYNAMICS OF CURRICULAR DESIGN (BASED UPON CLASS NOTES OF THE WRITER FROM EDUCATION 701, FUNDAMENTALS OF CURRICULUM, TAUGHT BY PAUL R. KLOHR, AUTUMN QUARTER, THE OHIO STATE UNIVERSITY.)

objectives behaviorally and is given a system for categorizing them according to intellectual operations and levels, a category system is needed to group objectives according to the uses of knowledge.

One final criticism is in regard to the second layer on the outer surface of the cylinder--"Teachers Develop the Learning Environment." The ways in which teachers develop the learning environment are never explained. The two subareas listed are "Motivating" and "Reinforcing." The topic "Readiness and Motivation in Learning" presents the idea that motivation is a complex concept, but does not give concrete ideas or theories about ways in which teachers can stimulate motivation. The same depersonalized approach prevails in this area as has been noted in several previous areas.

It is apparent that several areas which were designated as essential according to the "Model for the Dynamics of Teaching" were not given adequate attention or were completely excluded among the topics of the TEAM Project.

Organization according to the prescribed framework

Toward the end of the TEAM Project contract period, the staff utilized a model which they believed showed the interrelationships of the various elements of the teaching-learning situation.[78] As a result of this model representing the later thinking of the project staff, it seemed appropriate to evaluate the program in terms of its adequacy in meeting the latest criteria of the staff. The final question of internal criteria was: "Does the program properly utilize the 'Simple Instructional System' (Figure 2, *supra*, p. 41)?"

In a recent publication, Krathwohl[79] notes that research into the concerns of beginning teachers shows that these teachers focus their attention upon content first, become aware of the communicative aspects of teaching next, and finally recognize the needs of the students. Moreover, Krathwohl proposes that teacher education programs be organized according to these same procedures--focus on content, communication, and learners. He says:

> In studying live teaching situations. . . We projected three stages; first, the teacher is presentation-centered; second, interaction-centered; and third, pupil-centered. . .
>
> . . . .
>
> Assuming that at least for a while teacher presentations still will be important such an analysis suggests a possible 'stages approach' to student teacher training.

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[78] AACTE, *Professional Teacher Education*, pp. 65-66.

[79] David R. Krathwohl, "Suggested Research to Improve Teacher Education," in *Teacher Education for the Future*, Second Yearbook of the National Society of College Teachers of Education (1968), pp. 48-49.

It is interesting to note the similarities between Krathwohl's conceptual scheme and the "Simple Instructional System" of the TEAM Project. The same basic elements of content, communication, and learning are suggested by both. Moreover, the same pattern of organizing these three elements is found. A difference is found in the order of teaching these elements, however, since the TEAM Project focuses upon the communicative aspects first.

There are decided similarities between Krathwohl's observations, the "Simple Instructional Model," and the outer surface of the cylindrical model, "Model for the Dynamics of Teaching." The "Model for the Dynamics of Teaching" is organized according to four main teaching activities--designing the learning experience, developing the learning environment, directing the experience, and evaluating learning.[80] Designing the learning experience has elements of content, communication, and learning in it, but the emphasis is upon content. By comparison, developing the learning environment stresses learning and directing the experience emphasizes communication. It may well be that for purposes of program organization, the reversal of order of developing the learning environment and directing the learning experience should occur.

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[80] AACTE, Professional Teacher Education, pp. 6-7.

The use of the "Simple Instructional Model" as an organizational model would improve the TEAM Project program. Since the program does not properly utilize the model, some of the natural dynamics of topic interrelationships are lost. If the program began by establishing purposes of education, the program would have more meaning for the prospective teacher. The order in which content, communication, and learning are presented should be rearranged. The environment should be infused throughout the sequence of content, communication, and learning, with the learner becoming a living, breathing subject and society becoming an interactive group of personalities. The change which education is directed toward should be an understandable goal rather than an academic category. The model has possibilities but can become as subject to misuse as earlier ideas of the TEAM Project program.

Summary

Chapters four and five have presented the findings of this study. Chapter four began with the presentation of statistical results from the questionnaire survey. It continued with a discussion of significant comments made by the questionnaire respondents. Chapter five evaluated the TEAM Project analytically through means of questions of external criteria in the first section of the chapter and questions of internal criteria in the second section.

Chapter six provides a summary of the study. First, the problem is restated. Then the procedures, findings, and conclusions are presented. The chapter concludes with recommendations for further research.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This chapter summarizes and concludes the study. The first section of the chapter restates the problem. The procedures used to conduct the study constitute the second portion of the chapter. In the third part, the findings of the study are summarized. The conclusions reached from the study are contained in the fourth section. Recommendations for further research constitute the final portion of the chapter.

Restatement of the Problem

The purpose of this study was to evaluate the curriculum phase of the Teacher Education and Media (TEAM) Project of the American Association of Colleges for Teacher Education (AACTE). The TEAM Project is a proposal for the professional component of a teacher education program. This professional program was first presented on a large scale to its public in 1964 in the publication known as the Proposal.[1] Since more than two-thirds of the teacher education institutions in the United States which produce more than 90 per cent of the nation's teachers belong to the AACTE, the backing of the TEAM Project program by the AACTE is a potent factor. Because of AACTE backing, the innovative nature of the TEAM Project program, and the lack of evaluative studies upon the program, the writer determined that such a study was needed. One phase of this evaluation was the consideration of the acquaintance, evaluation, influence, and utilization at AACTE member institutions of the TEAM Project materials. The second phase was the evaluation of the TEAM Project curriculum through external criteria of curriculum excellence. The third phase was the evaluation of the TEAM Project curriculum through criteria of curriculum excellence as presented by the TEAM Project staff in TEAM Project writings (or internal criteria).

Summary of the Procedures

One part of the procedures was to conduct a questionnaire survey. A pilot study was conducted among Iowa institutions to perfect the questionnaire. The Chief

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[1] Herbert F. LaGrone, A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education (referred to hereinafter as the Proposal).

Institutional Representative at each college or university in the AACTE--more than 800 institutions--received a questionnaire.[2] This questionnaire asked the representative about: his acquaintance with the TEAM Project Proposal; the value, utilization, and influence of the rationale, organization, content, and multimedia commitment of the program; the advantages and disadvantages; the value and use of each topic from the Proposal; needed topics; pertinent texts and audiovisual materials; and, reactions to the program. The responses to the various items, if possible, were tallied into subtotals on the basis of private versus public institutions, size of institution (six groupings), and five geographical areas. These subtotals were scrutinized to ascertain if discrepancies were given to various questions because of the type, size, or location of the institution. The significant comments made by the respondents were cited and evaluated.

A second part of the procedures involved the formulation of questions which would judge a teacher education program and the application of these questions to the TEAM Project. These questions were formulated by creating a rationale for education and teacher education, then proceeding logically to decide upon needed elements within a teacher education program. These elements were then framed into questions to use in scrutinizing the TEAM Project program. The application of these seven questions[3] constituted the external criteria phase of analytic evaluation.

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[2] This questionnaire is located in Appendix A, pp. 317-322 of this study.

The third part of the procedures involved the application of requirements created by the TEAM Project staff to their own program. Throughout the various writings related to the TEAM Project, there were statements made regarding the needs of a teacher education program. These needs, as envisioned by the TEAM Project staff, were reworded into questions that would serve to judge the TEAM Project program. The application of these ten questions[4] constituted the internal criteria phase of analytic evaluation.

The statistical results of the questionnaire, the significant comments by the questionnaire respondents, and the philosophic criticism by external and internal criteria provided an evaluation of the TEAM Project program that had both breadth and depth. In this manner, the most successful evaluation which could be achieved at such an early date after the introduction of the program was provided.

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[3] Supra, p. 153.

[4] Supra, pp. 154-155.

Summary of the Findings

A number of findings of several types were reached from this study. There were statistical findings about the acquaintance, influence, valuation, and utilization of the TEAM Project by AACTE institutions. Significant comments were made on a number of topics by the respondents. Strengths and weaknesses of the TEAM Project program were discerned by comparing the program with both external and internal criteria for curriculum design.

The findings that need to be considered first are the statistical findings. There were 51 per cent of the questionnaire recipients who responded to the questionnaire. The writer believed that the percentage of responses was satisfactory in view of the recent formulation of the program. He reasoned that those who had replied were sufficiently interested that their responses in regard to improvements needed would tend to make the program more acceptable both to them and to the non-responding recipients of the questionnaire.

The respondents gave a favorable evaluation to the TEAM Project program. If they knew of the program, they tended to complete the questionnaire rather than returning it with minimum responses. The program through the publications and workshops has brought about change in a reasonably large number of institutions. The size, type, and location of the institution did not seem to have any decided effect upon the institutions in regard to acquaintance with or use of the TEAM Project curriculum. Those respondents who were acquainted with the TEAM Project program indicated that they:

1. consider it of high value;
2. view it as an improvement over existing programs;
3. have been influenced by it;
4. are utilizing certain portions of it;
5. are satisfied with the rationale;
6. have not been influenced by or are not utilizing its organization of course work;
7. utilize only parts of its content;
8. are implementing a multimedia approach to education.

The topics which received high ratings were those concerned with classroom communication, psychological foundations, lesson planning, practice situations, and objectives. The topics which tended to receive low ratings were those concerned with theories of knowledge, theory construction, and environmental factors. One disadvantage of the TEAM Project that seems to predominate feelings is that adequate materials pertaining to the various topics have not been developed for undergraduate usage.

The significant comments indicated several things. Faculty introspection into teacher education content has occurred and has resulted in changed content. While the TEAM Project program was not inclusive enough in regard to content and was not developed sufficiently, it did accomplish sensitivity to the content included in teacher education programs.

The results of the study from analytic evaluation were of greater import than the results of the survey according to the writer's viewpoint. The answers to the questions of external and internal criticism warrant more detail in summary than the statistical results and significant comments were accorded.

External criteria disclosed several weaknesses of the TEAM Project program that potential users need to consider. One was the failure of the TEAM Project to establish a sound philosophy regarding the natures of man and of teaching. While epistemological questions are given consideration, there is no consideration of ontological questions in order to give background to epistomological viewpoints. Moreover, epistomological information would be more contributive to the program if it preceded the analytical studies presently located in Course I of the Proposal.

A second weakness was in regard to creating an explicit purpose for teacher education. Teacher education programs should engender the need for education and for teacher education within the prospective teachers. Such engenderment is not provided for by the TEAM Project program.

Several weaknesses were related to the type of content and learning activities included in the TEAM Project. One is that the first four courses focus upon background knowledge with decision-making ability being reserved for parts of the fifth course only. A second is that theory and practice are not sufficiently integrated resulting in theory not guiding the use of technical skills. Non-essential knowledge was not excluded sufficiently well, specifically because of poor selection of source materials. The project presents materials that aid in the categorizing of teacher behavior, but materials to use in evaluating teacher behavior are quite insufficient and are inadequately handled. There are some areas of content which are needed but are not included in the TEAM Project program. Inadequate attention is given to the type of learning activities to be utilized in presenting the content included in the various topics. Multimedia is no more applicable, it would seem, to the TEAM Project topics than it is to the traditional topics of teacher education programs.

A final weakness which was discerned was in regard to the organization. Organization was to be according to the natural dynamics of the teaching-learning situation rather than the traditional research-based method of organizing content. Had either the top end surface and the vertical layers of the cylindrical "Model for the Dynamics of Teaching" or the components of the "Simple Instructional System" been utilized, the resultant organization would have been a decided improvement. To a greater extent than is desirable, the present categories of foundational studies, methodology, educational psychology, curriculum development, and student teaching make their appearance in the program.

Several strengths also appeared as salient features of the TEAM Project program. These strengths are of such a nature that the formulators of any teacher education program would be well advised to consider them. The first is the use of an organizing center. The TEAM Project suggested the use of the teaching-learning situation as an organizing center. Unless a topic had direct bearing and usefulness to the teaching-learning situation, it could not supposedly qualify for inclusion in the program. Such an approach has the distinct advantage of providing a delimiting criteria for content. A second strength is that the TEAM Project curriculum was to be based upon teacher behaviors. This guideline gains its merit from the fact that relevance of the topics is improved. The third strength is the guideline that the natural dynamics of the teaching-learning situation rather than research fields of specialization should serve as the organizational framework for teacher education programs. While it has been mentioned that the TEAM Project did not fulfill this guideline, nevertheless, a pertinent criticism of existing programs and a guideline for new programs was outlined.

Conclusions

What can be said about the TEAM Project curriculum phase? A number of conclusions were reached on the basis of this study. First of all, the general evaluation given the program was quite favorable. Secondly, several advantages, contributions, and disadvantages appeared which deserve the attention of those involved in teacher education. These each need to be given consideration.

The general evaluation given the TEAM Project by the respondents indicates that much of the program is highly commendable. The program has made a decided impact upon the professional components of a number of institutions. There has been a relatively short time which has elapsed since the introduction of the project. This indicates that the respondents consider the new curriculum meeting an especial need in teacher education. Judging from the questions of general evaluation, it appears that the need in teacher education which the TEAM Project satisfies is mainly in regard to portions of the proposed content and to the philosophy of content presentation based upon the cognitive cycle.

One contribution which the TEAM Project provided for the curriculum of teacher education was a stimulus to examine traditional content. To be sure, other people and projects have suggested a similar activity. The backing of the AACTE provided an aura of authority and responsibility which other people and groups have not had according to the judgment of professors of education. The TEAM Project presented the challenge that content for teacher education must make a demonstrable change in the classroom teacher's behavior. The authority and responsibility of the AACTE combined with the need for demonstrable change occasioned a more intense scrutiny on many campuses of the professional component. The impact which the respondents say occurred is sufficient evidence to support this conclusion.

A second contribution was the recommendation of teacher activities as learning centers. Rather than the use of research topics as subject areas, teacher activities were viewed as a more dynamic approach to organization.

While the TEAM Project program did not remain faithful to the guideline of using teacher activities as learning centers, it did propose a workable substitute for the present system of organizing.

A third contribution of the TEAM Project program is that it suggests a dynamic view of education rather than a static concept of the educational process. Through the use of analytic studies, the possibility of introspection into classroom activities can occur. If the analytic studies become simply more content to memorize, then a static view is again the result. If analytic studies are used as observational tools for investigating, the professional component can be a dynamic period. These tools can be used by the prospective teacher to scrutinize other public school teachers first, then to perform self-scrutiny later. The approach of using analytic studies adds a needed element to professional preparation, as the writer evaluates things, which the job analysis or role description approach of studying the teacher as classroom leader, disciplinarian, motivator, researcher, and counselor does not provide.

An advantage of the TEAM Project is that it is more economical. The TEAM Project included only those materials which the project staff considered of paramount importance. Those areas of content which would not be useful to the prospective teacher, even though they constitute part of the research subdivision, were excluded from the program. A definite emphasis can be placed upon essential learnings in this way. While the selection of topics by the TEAM Project staff may not have been the most advantageous, the writer does consider the intent to have been based upon principles of sound curricular design.

A definite disadvantage of the TEAM Project program is its lack of materials concerning the student. Teaching should be viewed as a warm, personal relationship between teacher and student. The student--child or adolescent--is not a learning machine. The need for teacher education programs to have a humanistic as well as a mechanistic element is essential. While there are certain learnings that should be approached from a scientific, mechanical viewpoint, other learnings require the development of attitudes, values, and perceptions. The writer believs that the emphasis by the TEAM Project program upon the mechanistic view of teaching is so great and the humanistic view is so slight that the importance of teachint the student is underemphasized in favor of teaching content.

The unsatisfactory consideration of knowledge is a disadvantage. Knowledge is viewed as an objective body of facts. The experiential encounter of the students with knowledge is neglected. The uses which knowledge would have for the student are never mentioned.

The insufficient philosophic background of the TEAM Project program is a major disadvantage. The lack of an ontological background upon which to base teacher behaviors very nearly diminishes the teacher from the role of a professional to that of a technician.

Perhaps the major disadvantage of the program is its lack of development. Part of this lack of development results in an insufficient explanation of the types of learning activities which would be appropriate in order to convey the knowledges which prospective teachers need. These knowledges must create changed teacher behavior rather than memorized verbal information. By not developing appropriate learning activities, the type of learning considered desirable by the project staff is less inclined to occur. The development of appropriate reading and audiovisual materials to be used for undergraduate students was needed but was not accomplished. Another part of the lack of development of the project was in regard to in-progress surveys to discover shortcomings that professionals other than the project staff might have detected. One more aspect of the lack of development was the failure to implement pilot projects and to conduct research upon the comparative advantages of the TEAM Project program and other teacher education programs.

The TEAM Project has made a decided contribution to teacher education. Most of this contribution has been in the rethinking of assumptions about the necessary knowledges and the organization of these knowledges for prospective teachers. Another legacy of the project is the increased acquaintance with those research studies which have implications for teacher education. Far from being a sterile project, then, the TEAM Project has been quite potent; while there are weaknesses, there are also strengths which have caused many people in teacher education to re-evaluate what is being done in programs across the country.

Recommendations for Further Research

The recommendations for further research which stem from this study can be grouped into four main categories: research to discover needed additions to the TEAM Project; research to determine how the TEAM Project topics can best be presented to undergraduates; research to provide continuous evaluation of the TEAM Project; and, research to determine the comparative advantages of different types of teacher education programs. The writer would like to consider each of these categories in some detail.

Research to discover needed additions to the TEAM Project is desirable. The TEAM Project consists entirely of topics based upon research studies or writings about the specific topic. In addition to determining weaknesses, such as a portion of this study accomplished, there is a need to integrate the additional topics into the structure of courses which were outlined plus citing references which would focus upon the topic being promoted. The discovery of additions which are needed would not simply be deciding upon topics, but would include the integration into the framework of topics and the selection of references.

Research should be conducted to determine how the TEAM Project topics can best be presented to undergraduate students. Much of this work might more properly be termed development, although research would have to accompany it. The development of several sets of materials for each topic would be helpful. After materials are developed, there should be a comparative study of these materials and accompanying learning activities in regard to the cognitive, affective, and psychomotor immediate learnings and long-term behavioral changes which are induced. In general, a comprehensive evaluation program needs to be created for the TEAM Project curriculum. This evaluation program should be designed around those competencies which can be identified that a good teacher needs, not just an evaluation program to see if the knowledges contained in the TEAM Project topics are learned to repeat back.

This study should be the first in a series to determine the impact of the TEAM Project program. It appears from this study that the adoption has been rapid of those topics which are suggested by the TEAM Project. In addition to content, there are the organizational, rationale, and multimedia phases of the program. The publication of Professional Teacher Education by the AACTE should have an impact upon the continuing dissemination of the program. If progress in teacher education programs is sincerely desired by the AACTE, the TEAM Project will become a continuing and evolutionary program rather than a short-term, aborted effort. The continuing impact should be assessed and should accompany the continuing effort toward improvement.

The TEAM Project staff claims to have designed a superior teacher education program. The rather audacious claim is also made that most existing teacher education programs are rather ineffective. A comparative study of the effectiveness of these various programs needs to be made. The research should be conducted in a manner that evaluates the programs, not on the basis of which program imparts particular content best, but which program creates the most effective teachers. If students from traditional programs are evaluated in terms of being able to analytically evaluate their own teaching by Flanders Interaction

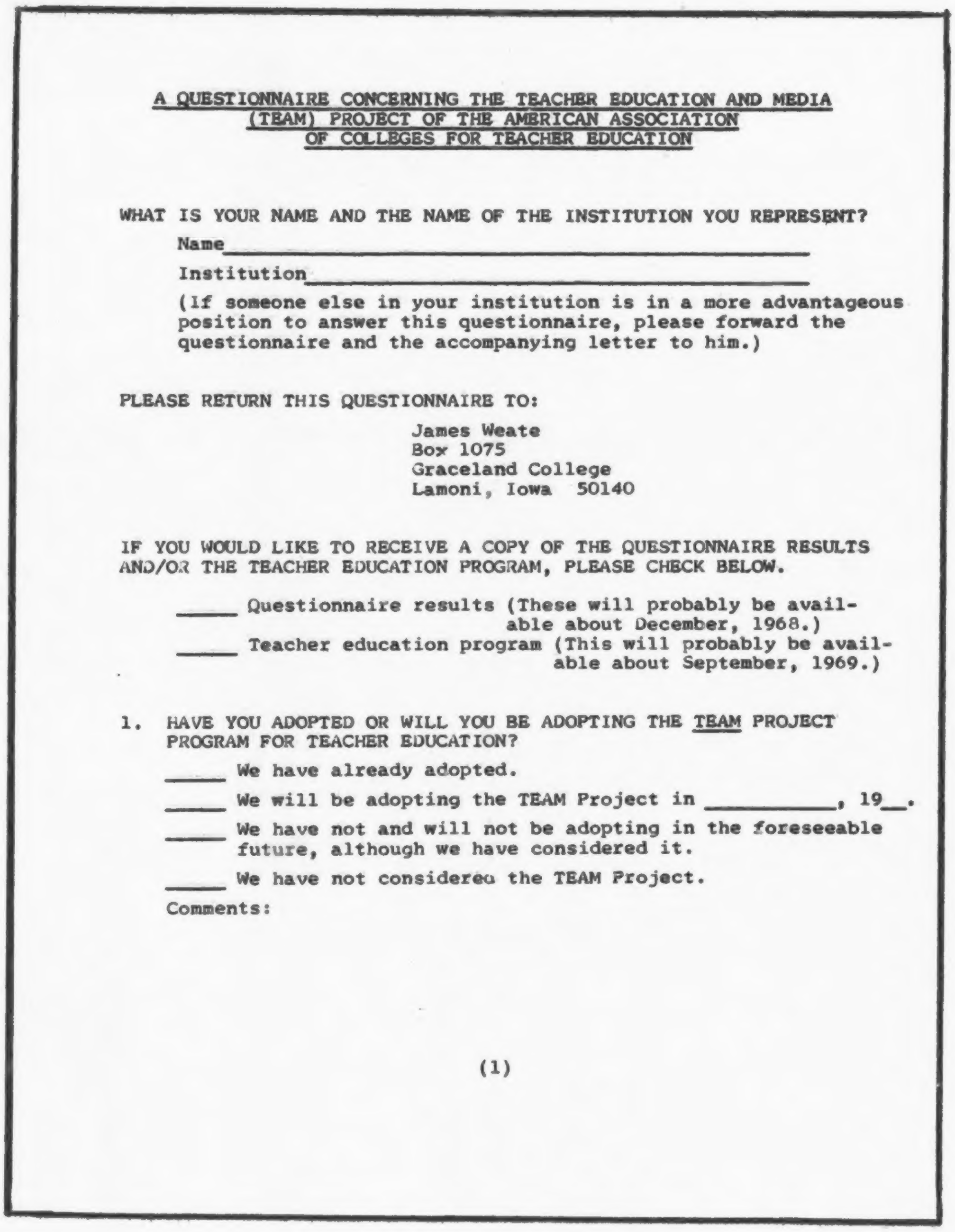
Analysis system, they will appear to be hopelessly ignorant; by the same token, students from the TEAM Project program will not be able to recognize which are Dewey's and which are Rousseau's ideas or which are Realist and which are Idealist stances. If agreement could be reached about what a good teacher is or if several definitions of a good teacher could be decided upon, then the students from the various programs be evaluated in terms of achieving success according to these definitions, the relative accomplishments of the various types of programs could be scrutinized.

If we are to achieve the production of better teachers as we in teacher education claim we wish to do, it would be quite desirable for us to consider the claims and charges of the TEAM Project. We need to experiment with various types of learning activities, content, and materials. We need to create different rationales, organizational patterns, and methodologies. We need to research the results of what we are doing. Then and only then can we claim to have accomplished the better type of teaching in teacher education programs that we want our students to perform in the public school situation.

APPENDIXES

APPENDIX A

PILOT STUDY QUESTIONNAIRE



A QUESTIONNAIRE CONCERNING THE TEACHER EDUCATION AND MEDIA
(TEAM) PROJECT OF THE AMERICAN ASSOCIATION
OF COLLEGES FOR TEACHER EDUCATION

WHAT IS YOUR NAME AND THE NAME OF THE INSTITUTION YOU REPRESENT?

Name______________________________

Institution______________________________

(If someone else in your institution is in a more advantageous position to answer this questionnaire, please forward the questionnaire and the accompanying letter to him.)

PLEASE RETURN THIS QUESTIONNAIRE TO:

James Weate
Box 1075
Graceland College
Lamoni, Iowa 50140

IF YOU WOULD LIKE TO RECEIVE A COPY OF THE QUESTIONNAIRE RESULTS AND/OR THE TEACHER EDUCATION PROGRAM, PLEASE CHECK BELOW.

_____ Questionnaire results (These will probably be available about December, 1968.)

_____ Teacher education program (This will probably be available about September, 1969.)

1. HAVE YOU ADOPTED OR WILL YOU BE ADOPTING THE TEAM PROJECT PROGRAM FOR TEACHER EDUCATION?

_____ We have already adopted.

_____ We will be adopting the TEAM Project in __________, 19__.

_____ We have not and will not be adopting in the foreseeable future, although we have considered it.

_____ We have not considered the TEAM Project.

Comments:

(1)

(2)

2. ARE YOU WELL ACQUAINTED WITH HERBERT F. LaGRONE'S A PROPOSAL FOR THE REVISION OF THE PRE-SERVICE PROFESSIONAL COMPONENT OF A PROGRAM OF TEACHER EDUCATION?

_____ Yes

_____ No

If your answer to this question is "Yes," we would appreciate it if you would complete the questionnaire. Whether you complete the questionnaire or not, please return it in the enclosed envelope. If your answer is "No," please return the questionnaire without completing it.

3. DO YOU THINK THE TEAM PROJECT PROGRAM IS A VALID PROGRAM FOR TEACHER EDUCATION?

_____ Yes, with no changes (no additions and no deletions).
_____ Yes, with minor changes (additions and/or deletions).
_____ Yes, but major changes are needed.
_____ No, not valid as a program for teacher education.
_____ Undecided.

Comments:

4. IF YOU HAVE ADOPTED (OR WILL BE ADOPTING) THE TEAM PROJECT PROGRAM, TO WHAT EXTENT IS (OR WILL BE) YOUR ADOPTION?

_____ Complete adoption
_____ Adoption with minor alterations
_____ Adoption with major alterations

Comments:

5. IF YOU HAVE ADOPTED, WILL BE ADOPTING, OR HAVE CONSIDERED THE TEAM PROJECT PROGRAM, WHAT VALUE DO YOU PLACE UPON EACH OF THE FOLLOWING SECTIONS? (Based upon the booklet prepared by Herbert F. LaGrone, *A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education*, Washington, D.C.: The American Association of Colleges for Teacher Education, 1964.)

NAME OF SECTION	WHAT IS THE VALUE OF IT? HI 5	4	3	2	LO 1	UNDECIDED
COURSE I. ANALYTICAL STUDY OF TEACHING						
A. A Concept of Teaching						
B. Paradigms, Models or Schema						
C. Concepts from Research in Teaching						
1. Interaction Analysis						
2. Pedagogical Moves and Teaching Cycles						
3. Logical Aspects of Teaching						
4. The Concept of Teaching Strategies for Cognitive Development						
D. Non-verbal Communication in the Classroom						
E. Assessment of the Social-Emotional Climate in the Classroom						
F. A Study of the Classroom Group as a Social System						
G. Nature of Leadership Style						
COURSE II. STRUCTURES AND USES OF KNOWLEDGE						
A. Determinants and Uses of Knowledge						
B. Logical Structure						
C. Structure and Form of Knowledge						
D. The Meaning of Subject Matter						
E. Logical Aspects of Teaching						
F. Analysis of Content and Existing Structure						
COURSE III. CONCEPTS OF HUMAN DEVELOPMENT AND LEARNING						
A. Structure of Intellect						
B. Cognitive Growth						
C. Concept Formation						
D. Cognitive Learning Styles						
E. Inquiry Training						
F. Readiness and Motivation in Learning						
G. Evaluation of Learning						
COURSE IV. DESIGNS FOR TEACHING-LEARNING						
A. Teaching Strategies						
B. Learning Unit Design						
C. Formation of Objectives						
D. Instructional Systems						
E. Programmed Instruction						
COURSE V. DEMONSTRATION AND EVALUATION OF TEACHING COMPETENCIES						
A. A Review of Teaching Behaviors						
B. Selecting and Planning Trial Experiences						
C. Analysis of Demonstrated Competencies						
D. Theories of Instruction and Teaching						
E. The Professional						

(4)

6. IF YOU HAVE ADOPTED (OR WILL BE ADOPTING) THE TEAM PROJECT PROGRAM, WHICH SECTIONS HAVE YOU ADOPTED (OR WILL YOU BE ADOPTING)? (Based upon the booklet prepared by Herbert F. LaGrone, A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education, Washington, D.C.: The American Association of Colleges for Teacher Education, 1964.)

NAME OF SECTION	DO YOU USE THIS SECTION?				
	EXTEN-SIVELY	GOOD DEAL	SMALL AMOUNT	NOT AT ALL	DON'T KNOW
COURSE I. ANALYTICAL STUDY OF TEACHING					
A. A Concept of Teaching					
B. Paradigms, Models or Schema					
C. Concepts from Research in Teaching					
1. Interaction Analysis					
2. Pedagogical Moves and Teaching Cycles					
3. Logical Aspects of Teaching					
4. The Concept of Teaching Strategies for Cognitive Development					
D. Non-verbal Communication in the Classroom					
E. Assessment of the Social-Emotional Climate in the Classroom					
F. A Study of the Classroom Group as a Social System					
G. Nature of Leadership Style					
COURSE II. STRUCTURES AND USES OF KNOWLEDGE					
A. Determinants and Uses of Knowledge					
B. Logical Structure					
C. Structure and Form of Knowledge					
D. The Meaning of Subject Matter					
E. Logical Aspects of Teaching					
F. Analysis of Content and Existing Structure					
COURSE III. CONCEPTS OF HUMAN DEVELOPMENT AND LEARNING					
A. Structure of Intellect					
B. Cognitive Growth					
C. Concept Formation					
D. Cognitive Learning Styles					
E. Inquiry Training					
F. Readiness and Motivation in Learning					
G. Evaluation of Learning					
COURSE IV. DESIGNS FOR TEACHING-LEARNING					
A. Teaching Strategies					
B. Learning Unit Design					
C. Formation of Objectives					
D. Instructional Systems					
E. Programmed Instruction					
COURSE V. DEMONSTRATION AND EVALUATION OF TEACHING COMPETENCIES					
A. A Review of Teaching Behaviors					
B. Selecting and Planning Trial Experiences					
C. Analysis of Demonstrated Competencies					
D. Theories of Instruction and Teaching					
E. The Professional					

COMMENTS ON QUESTIONS #5 AND/OR #6:

7. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR DRAWBACK(S) OF THE TEAM PROJECT PROGRAM?

_____ It has application only for a certain type of classroom situation.

_____ It has application only for a certain type of subject matter.

_____ It does not present alternative views of learning theory.

_____ It needs to include definite material on lesson planning, classroom control, and other similar, practical matters.

_____ Materials in the forms of textbooks, audio-visual aids, and the like need to be produced before it can be used in most colleges for undergraduate work.

_____ It needs to include more materials from the "social foundations of education."

_____ It is couched in language that is too theoretical and/or too technical for the average undergraduate student to comprehend.

_____ As they are now written, the educational values of these materials cannot be understood by the typical college professor of education.

_____ Other (please specify) ______________________________

____

____

____

Comments:

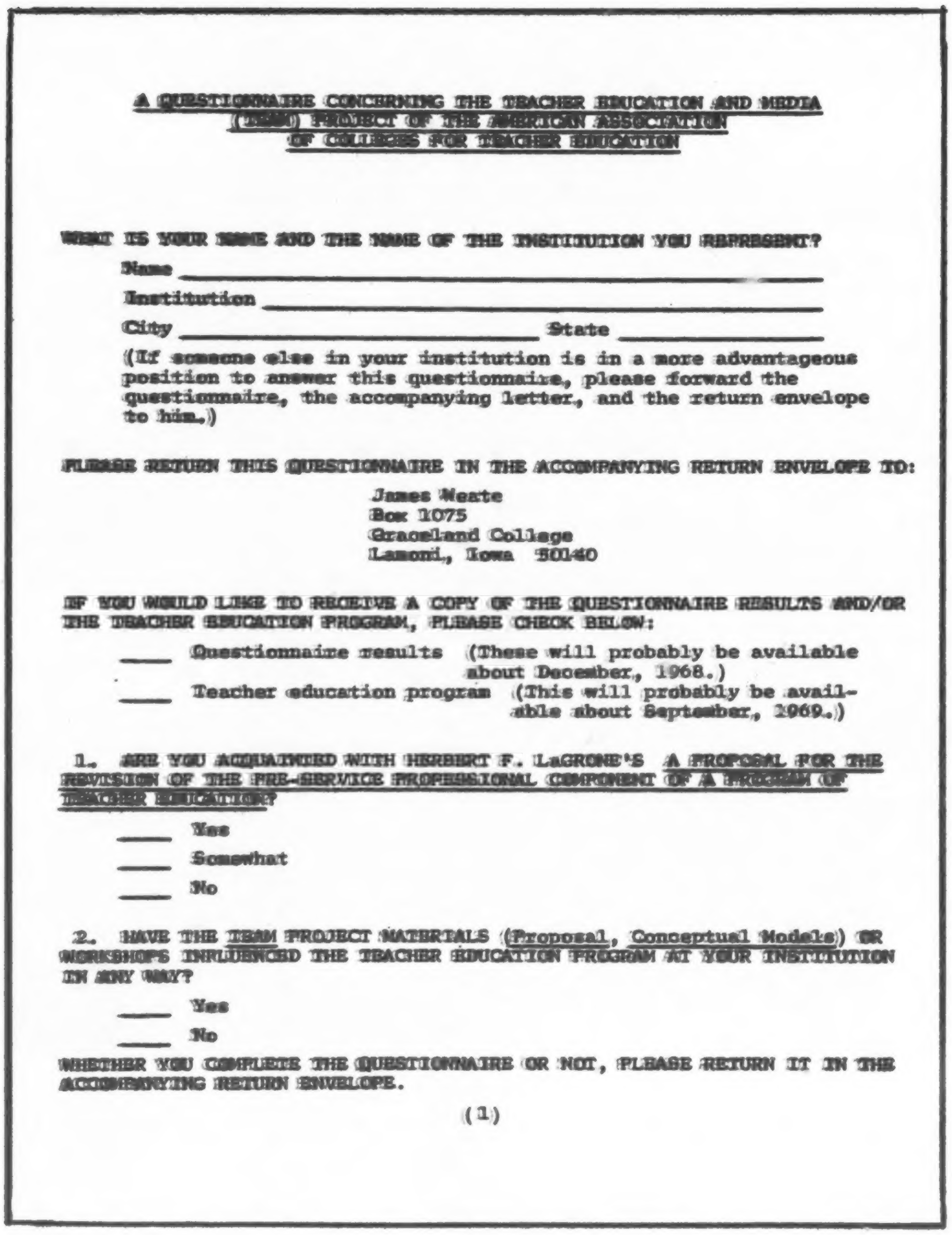
8. IF YOU HAVE ADOPTED (OR WILL BE ADOPTING) THE TEAM PROJECT, AND USE (OR WILL USE) COMMERCIALLY AVAILABLE MATERIALS RELATED TO THE TEAM PROJECT (SUCH AS TEXTBOOKS, A-V AIDS, ETC.) WHAT ARE THESE MATERIALS?

9. WHAT ADDITIONAL TOPICS DO YOU BELIEVE TO BE NECESSARY FOR A PROGRAM OF TEACHER EDUCATION THAT THE TEAM PROJECT DOES NOT CONTAIN?

10. WHAT ADDITIONAL COMMENTS DO YOU HAVE CONCERNING THE TEAM PROJECT THAT DO NOT SEEM TO FIT UNDER THE ANSWERS TO ANY OF THE ABOVE QUESTIONS?

APPENDIX B

REVISED QUESTIONNAIRE



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(TEAM) PROJECT OF THE AMERICAN ASSOCIATION
OF COLLEGES FOR TEACHER EDUCATION

WHAT IS YOUR NAME AND THE NAME OF THE INSTITUTION YOU REPRESENT?

Name ______________________________

Institution ______________________________

City ____________________ State ______________

(If someone else in your institution is in a more advantageous position to answer this questionnaire, please forward the questionnaire, the accompanying letter, and the return envelope to him.)

PLEASE RETURN THIS QUESTIONNAIRE IN THE ACCOMPANYING RETURN ENVELOPE TO:

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____ Questionnaire results (These will probably be available about December, 1968.)

____ Teacher education program (This will probably be available about September, 1969.)

1. ARE YOU ACQUAINTED WITH HERBERT F. LaGRONE'S A PROPOSAL FOR THE REVISION OF THE PRE-SERVICE PROFESSIONAL COMPONENT OF A PROGRAM OF TEACHER EDUCATION?

____ Yes

____ Somewhat

____ No

2. HAVE THE TEAM PROJECT MATERIALS (Proposal, Conceptual Models) OR WORKSHOPS INFLUENCED THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION IN ANY WAY?

____ Yes

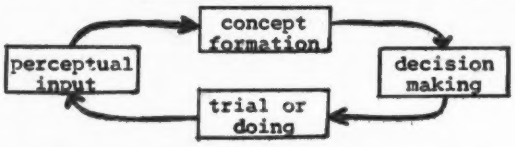
____ No

WHETHER YOU COMPLETE THE QUESTIONNAIRE OR NOT, PLEASE RETURN IT IN THE ACCOMPANYING RETURN ENVELOPE.

(1)

3. DO YOU THINK WOODRUFF'S CYBERNETIC MODEL (see figure below) AND ITS IMPLICATIONS (pp. 1-15 of the Proposal) PROVIDE A VALID RATIONALE FOR TEACHER EDUCATION?

____ Yes
____ No
____ Undecided



4. IN GENERAL, HOW DO YOU THINK THE TEAM PROJECT RATIONALE COMPARES WITH THE RATIONALE FOR TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

____ Superior to existing rationales   Comments: (if you wish)
____ About equal
____ Inferior to existing rationales
____ Undecided

5. HAS THE TEAM PROJECT RATIONALE HAD AN INFLUENCE UPON THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION?

____ Yes   Comments:
____ No

6. DO YOU USE THE TEAM PROJECT RATIONALE FOR THE RATIONALE OF TEACHER EDUCATION AT YOUR INSTITUTION?

____ Yes   Comments:
____ Partially
____ No

7. DO YOU THINK THE ORGANIZATION OF COURSE WORK AS PRESENTED IN THE PROPOSAL IS SUITABLE FOR A PROGRAM OF TEACHER EDUCATION?

____ Yes   Comments:
____ No
____ Undecided

8. IN GENERAL, HOW DO YOU THINK THE ORGANIZATION OF COURSE WORK IN THE PROPOSAL COMPARES WITH THE ORGANIZATION OF COURSE WORK IN TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

____ Superior to existing programs   Comments:
____ About equal
____ Inferior to existing programs
____ Undecided

9. HAS THE ORGANIZATION OF COURSE WORK IN THE PROPOSAL INFLUENCED THE ORGANIZATION OF COURSE WORK IN YOUR INSTITUTION?

____ Yes   Comments:
____ No

10. DO YOU USE THE COURSE WORK ORGANIZATION AS PRESENTED IN THE PROPOSAL?

____ Yes   Comments:
____ No

11. DO YOU THINK THE CONTENT REFERRED TO IN THE VARIOUS SECTIONS OF THE PROPOSAL IS VALID CONTENT FOR A PROGRAM OF TEACHER EDUCATION?

____ Yes Comments:
____ Part of it
____ No
____ Undecided

12. IN GENERAL, HOW DO YOU THINK THE CONTENT REFERRED TO IN THE PROPOSAL COMPARES WITH THE CONTENT IN TRADITIONAL PROGRAMS OF TEACHER EDUCATION?

____ Superior to existing content Comments:
____ About equal
____ Inferior to existing content
____ Undecided

13. DO YOU USE THE CONTENT REFERRED TO IN THE PROPOSAL IN THE PROGRAM OF TEACHER EDUCATION AT YOUR INSTITUTION?

____ All of it Comments:
____ Some of it
____ None of it

14. IF YOU USE ALL OR SOME OF THE CONTENT, HAVE YOU INCLUDED THIS CONTENT BECAUSE OF THE INFLUENCE OF THE TEAM PROJECT MATERIALS OR WORKSHOPS?

____ Yes Comments:
____ Partially
____ No

15. DO YOU THINK THE MULTIMEDIA APPROACH TO INSTRUCTION IS AN IMPROVEMENT OVER EXISTING METHODS OF INSTRUCTION?

____ Yes Comments:
____ No
____ Undecided

16. DO YOU THINK THE TEAM PROJECT MATERIALS EFFECTIVELY LEND THEMSELVES TO THE UTILIZATION OF THE MULTIMEDIA APPROACH?

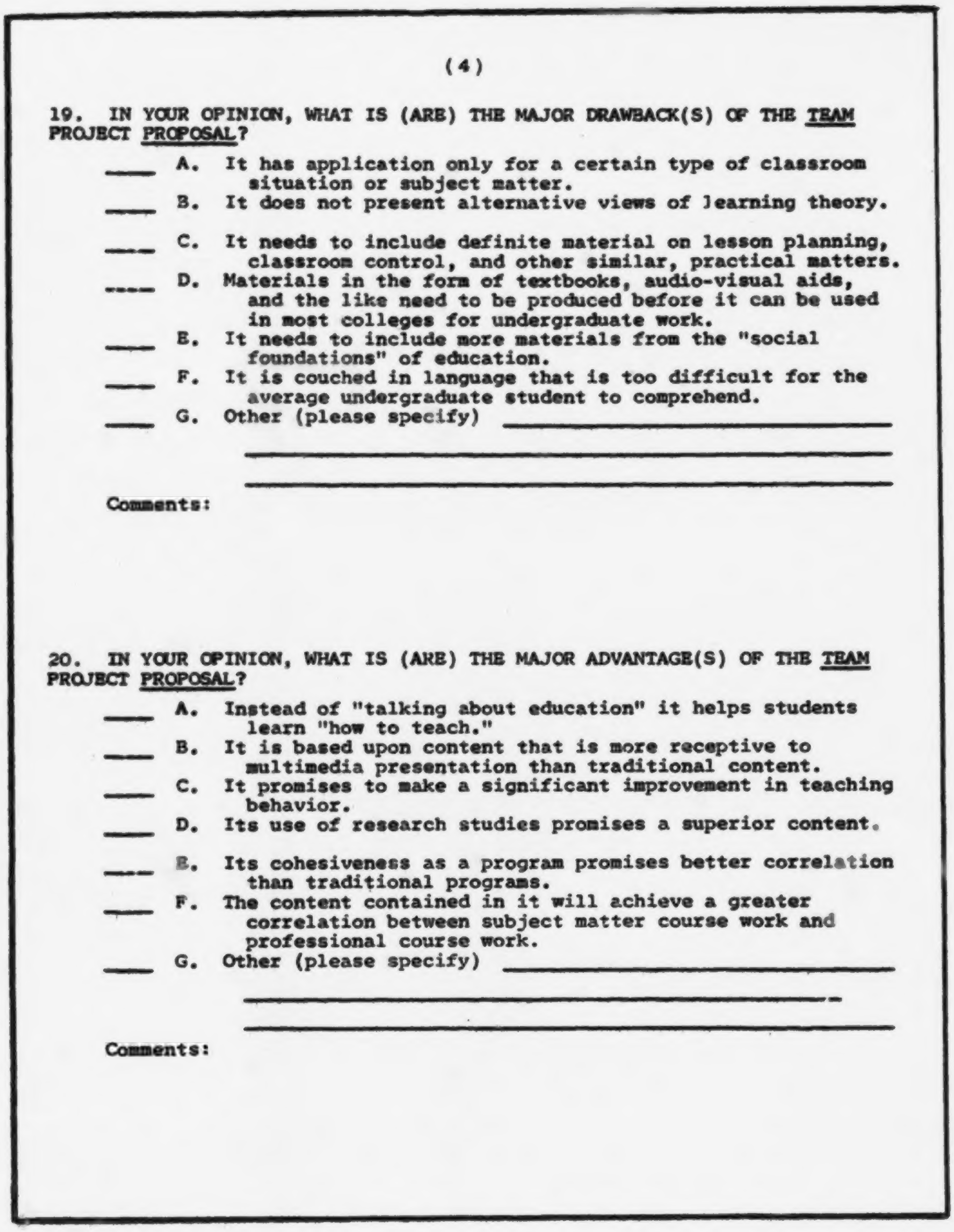
____ Yes Comments:
____ No
____ Undecided

17. DO YOU USE A MULTIMEDIA APPROACH IN THE INSTRUCTION OF EDUCATION COURSES AT YOUR INSTITUTION?

____ Yes Comments:
____ Partially
____ No

18. IF YOUR ANSWER TO QUESTION #17 IS "YES," HAVE YOU BEGUN USING MULTIMEDIA INSTRUCTION BECAUSE OF THE INFLUENCE OF THE TEAM PROJECT?

____ Yes Comments:
____ Partially
____ No



(4)

19. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR DRAWBACK(S) OF THE TEAM PROJECT PROPOSAL?

____ A. It has application only for a certain type of classroom situation or subject matter.
____ B. It does not present alternative views of learning theory.
____ C. It needs to include definite material on lesson planning, classroom control, and other similar, practical matters.
____ D. Materials in the form of textbooks, audio-visual aids, and the like need to be produced before it can be used in most colleges for undergraduate work.
____ E. It needs to include more materials from the "social foundations" of education.
____ F. It is couched in language that is too difficult for the average undergraduate student to comprehend.
____ G. Other (please specify) ____________________

Comments:

20. IN YOUR OPINION, WHAT IS (ARE) THE MAJOR ADVANTAGE(S) OF THE TEAM PROJECT PROPOSAL?

____ A. Instead of "talking about education" it helps students learn "how to teach."
____ B. It is based upon content that is more receptive to multimedia presentation than traditional content.
____ C. It promises to make a significant improvement in teaching behavior.
____ D. Its use of research studies promises a superior content.
____ E. Its cohesiveness as a program promises better correlation than traditional programs.
____ F. The content contained in it will achieve a greater correlation between subject matter course work and professional course work.
____ G. Other (please specify) ____________________

Comments:

21. IF YOU THINK THAT THE CONTENT REFERRED TO BY THE SECTIONS NAMED BELOW IS OF SUFFICIENT VALUE THAT YOU GIVE IT "TOP PRIORITY" FOR INCLUSION IN THE UNDERGRADUATE PHASE OF TEACHER EDUCATION, PLACE AN "X" IN COLUMN "A" OF THE FOLLOWING CHART. IF YOU USE THIS MATERIAL IN THE TEACHER EDUCATION PROGRAM AT YOUR INSTITUTION, PLACE AN "X" IN COLUMN "B." PERSONS OR TECHNIQUES ASSOCIATED WITH THE CONTENT IN THE VARIOUS SECTIONS ARE NOTED WITHIN PARENTHESES. (Based upon the booklet prepared by Herbert F. LaGrone, A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education, Washington, D.C.: The American Association of Colleges for Teacher Education, 1964.)

NAME OF SECTION	COLUMN A	COLUMN B
COURSE I. ANALYTICAL STUDY OF TEACHING		
A. A Concept of Teaching (Smith)		
B. Paradigms, Models or Schema (Maccia, Maccia, Jewett, Gage)		
C. Concepts from Research in Teaching		
1. Interaction Analysis (Flanders)		
2. Pedagogical Moves and Teaching Cycles (Bellack)		
3. Logical Aspects of Teaching (Smith)		
4. The Concept of Teaching Strategies for Cognitive Development (Taba)		
D. Non-verbal Communication in the Classroom (Galloway, Hall)		
E. Assessment of the Social-Emotional Climate in the Classroom (Withall)		
F. A Study of the Classroom Group as a Social System (Getzels and Thelen)		
G. Nature of Leadership Style (Jenkins)		
COURSE II. STRUCTURES AND USES OF KNOWLEDGE		
A. Determinants and Uses of Knowledge (Broudy, Smith, Burnett)		
B. Logical Structure (Hickey, Newton)		
C. Structure and Form of Knowledge (Bruner)		
D. The Meaning of Subject Matter (Henderson)		
E. Logical Aspects of Teaching (Smith, Jenkins)		
F. Analysis of Content and Existing Structure (Broudy, Smith, Burnett, Woodruff, Jenkins)		
COURSE III. CONCEPTS OF HUMAN DEVELOPMENT AND LEARNING		
A. Structure of Intellect (Guilford, Merrifield, Cox)		
B. Cognitive Growth (Bruner, Mooney)		
C. Concept Formation (Woodruff)		
D. Cognitive Learning Styles (Getzels, Taba, Riessman)		
E. Inquiry Training (Suchman)		
F. Readiness and Motivation in Learning (Broudy, Smith, Burnett, Tyler, Sears, Hilgard)		
G. Evaluation of Learning		
COURSE IV. DESIGNS FOR TEACHING-LEARNING		
A. Teaching Strategies (Smith, Taba)		
B. Learning Unit Design (Woodruff)		
C. Formation of Objectives (Bloom, taxonomy, Mager, behavioral objectives)		
D. Instructional Systems (Lumsdaine)		
E. Programmed Instruction (Lumsdaine, Markle, Gagne)		

(continued on next page)

21. (continued)

NAME OF SECTION	COLUMN	
	A	B
COURSE V. DEMONSTRATION AND EVALUATION OF TEACHING COMPETENCIES A. A Review of Teaching Behaviors		
B. Selecting and Planning Trial Experiences (Allen, microteaching, Cruickshank, Broadbent, simulation)		
C. Analysis of Demonstrated Competencies (Allen, microteaching, Cruickshank, Broadbent, simulation)		
D. Theories of Instruction and Teaching (Maccia, Maccia, Jewett, Ryans)		
E. The Professional		

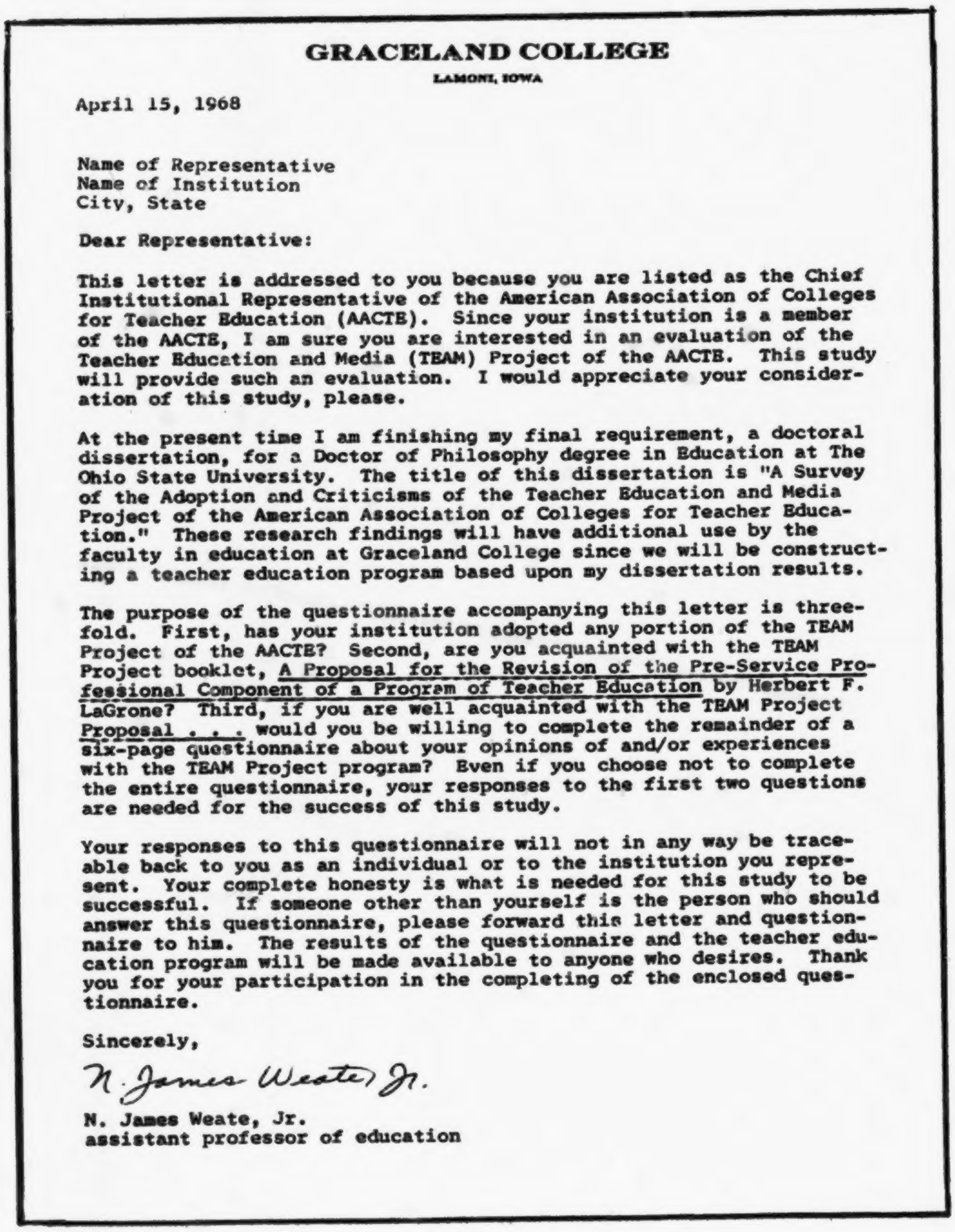
22. WHAT ADDITIONAL TOPICS OR CONCEPTS DO YOU BELIEVE TO BE NECESSARY FOR A PROGRAM OF TEACHER EDUCATION THAT THE TEAM PROJECT DOES NOT CONTAIN?

23. IF YOU USE (OR WILL USE) COMMERCIALLY AVAILABLE MATERIALS RELATED TO THE TEAM PROJECT (SUCH AS TEXTBOOKS, A-V AIDS, ETC.) WHAT ARE THESE MATERIALS?

24. WHAT ADDITIONAL COMMENTS DO YOU HAVE CONCERNING THE TEAM PROJECT THAT DO NOT SEEM TO FIT UNDER THE ANSWERS TO ANY OF THE ABOVE QUESTIONS?

APPENDIX C

COVER LETTER FOR QUESTIONNAIRE



GRACELAND COLLEGE
LAMONI, IOWA

April 15, 1968

Name of Representative
Name of Institution
City, State

Dear Representative:

This letter is addressed to you because you are listed as the Chief Institutional Representative of the American Association of Colleges for Teacher Education (AACTE). Since your institution is a member of the AACTE, I am sure you are interested in an evaluation of the Teacher Education and Media (TEAM) Project of the AACTE. This study will provide such an evaluation. I would appreciate your consideration of this study, please.

At the present time I am finishing my final requirement, a doctoral dissertation, for a Doctor of Philosophy degree in Education at The Ohio State University. The title of this dissertation is "A Survey of the Adoption and Criticisms of the Teacher Education and Media Project of the American Association of Colleges for Teacher Education." These research findings will have additional use by the faculty in education at Graceland College since we will be constructing a teacher education program based upon my dissertation results.

The purpose of the questionnaire accompanying this letter is threefold. First, has your institution adopted any portion of the TEAM Project of the AACTE? Second, are you acquainted with the TEAM Project booklet, *A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education* by Herbert F. LaGrone? Third, if you are well acquainted with the TEAM Project *Proposal . . .* would you be willing to complete the remainder of a six-page questionnaire about your opinions of and/or experiences with the TEAM Project program? Even if you choose not to complete the entire questionnaire, your responses to the first two questions are needed for the success of this study.

Your responses to this questionnaire will not in any way be traceable back to you as an individual or to the institution you represent. Your complete honesty is what is needed for this study to be successful. If someone other than yourself is the person who should answer this questionnaire, please forward this letter and questionnaire to him. The results of the questionnaire and the teacher education program will be made available to anyone who desires. Thank you for your participation in the completing of the enclosed questionnaire.

Sincerely,

N. James Weate, Jr.

N. James Weate, Jr.
assistant professor of education

APPENDIX D

TABLE 10. SUMMARY OF QUESTIONNAIRE RESPONSES

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
Number Involved		27	34	27	48	17	35	17	22	28	20	31	80	73	153
1	1	21	18	13	30	7	18	9	11	18	13	20	50	39	89
	2	6	10	11	15	9	13	7	7	8	7	9	25	26	51
	3	0	6	3	3	1	4	1	4	2	0	2	5	8	13
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	19	18	12	28	10	21	11	10	20	8	17	47	40	87
	2	7	16	13	20	7	14	5	11	7	12	14	31	32	63
	0	1	0	2	0	0	0	1	1	1	0	0	2	1	3
3	1	18	18	14	30	10	16	8	14	17	14	21	52	38	90
	2	2	2	1	2	0	1	1	0	1	1	3	4	3	7
	3	6	13	12	10	6	16	5	7	9	4	6	21	26	47
	0	1	1	0	6	1	2	3	1	1	1	1	3	6	9
4	1	20	18	14	22	7	18	10	7	17	12	17	46	35	81
	2	6	9	6	9	4	5	2	10	7	2	8	18	16	34
	3	0	0	2	1	1	2	0	1	0	1	0	2	2	4
	4	1	5	4	8	5	7	3	3	3	2	5	9	14	23
	0	0	2	1	8	0	3	2	1	1	3	1	5	6	11
5	1	19	20	14	25	11	20	10	11	20	10	18	49	40	89
	2	6	14	12	16	6	12	4	9	7	9	13	28	26	54
	0	2	0	1	7	0	3	3	2	1	1	0	3	7	10
6	1	2	1	0	4	2	3	1	0	3	0	2	5	4	9
	2	16	13	14	21	8	16	6	11	12	12	15	41	31	72
	3	8	20	13	17	7	13	8	10	13	7	14	33	32	65
	0	1	0	0	6	0	3	2	1	0	1	0	1	6	7
7	1	18	13	13	24	10	17	6	11	19	7	18	46	32	78
	2	3	3	1	4	1	3	0	1	1	4	3	7	5	12
	3	4	16	11	13	5	10	9	8	6	8	8	21	28	49
	0	2	2	2	7	1	5	2	2	2	1	2	6	8	14
8	1	19	16	13	27	7	18	11	7	20	9	17	47	35	82
	2	4	9	7	8	5	4	1	9	5	7	7	19	14	33
	3	0	0	2	0	0	1	0	1	0	0	0	1	1	2
	4	4	7	4	7	4	8	3	4	3	3	5	10	16	26
	0	0	2	1	6	1	4	2	0	0	1	2	4	6	10
9	1	10	10	7	20	7	12	5	7	14	4	12	31	23	54
	2	15	19	16	22	9	17	10	12	12	15	15	41	40	81
	0	2	5	4	6	1	6	2	3	2	1	4	8	10	18

TABLE 10 (Continued)

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
10	1	7	1	1	4	4	3	1	1	7	2	3	9	8	17
	2	17	27	23	36	12	26	12	17	20	17	23	61	54	115
	0	3	6	3	8	1	6	4	4	1	1	5	10	11	21
11	1	11	10	5	15	7	9	4	6	9	7	13	25	23	48
	2	15	17	12	19	6	14	6	10	15	10	14	42	27	69
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	1	4	6	7	3	7	3	4	4	1	2	8	13	21
	0	0	3	4	7	1	5	4	2	0	2	2	5	10	15
12	1	18	16	13	23	8	15	9	7	19	9	19	47	31	78
	2	7	9	4	8	5	7	2	8	6	7	3	15	18	33
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	2	7	7	10	3	8	2	6	3	2	8	15	14	29
	0	0	2	3	7	1	5	4	1	0	2	1	3	10	13
13	1	0	1	0	0	0	0	0	0	1	0	0	0	1	1
	2	23	24	19	31	14	25	11	15	22	15	23	63	48	111
	3	3	5	6	8	1	5	3	5	5	2	3	9	14	23
	0	1	4	2	9	2	5	3	2	0	3	5	8	10	18
14	1	5	4	2	6	1	4	1	1	6	1	5	9	9	18
	2	14	11	7	17	6	16	6	10	9	7	7	26	29	55
	3	4	14	8	12	7	7	5	6	8	8	11	27	18	45
	0	4	5	10	13	3	8	5	5	5	4	8	18	17	35
15	1	26	31	22	33	14	27	14	18	25	15	27	68	58	126
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	2	3	7	3	5	1	3	2	1	3	6	9	15
	0	1	1	2	8	0	3	2	1	1	4	1	6	6	12
16	1	20	24	17	27	11	24	9	13	20	12	21	53	46	99
	2	2	0	0	0	0	0	0	0	1	0	1	1	1	2
	3	4	10	7	14	5	6	6	7	7	6	8	22	18	40
	0	1	0	3	7	1	5	2	2	0	2	1	4	8	12
17	1	5	12	7	8	8	10	6	3	8	4	9	20	20	40
	2	19	19	17	32	8	19	8	15	17	14	22	52	43	95
	3	2	3	2	1	1	4	1	3	1	0	0	4	5	9
	0	1	0	1	7	0	2	2	1	2	2	0	4	5	9
18	1	4	0	0	1	3	1	1	0	4	0	2	5	3	8
	2	5	7	7	13	1	8	4	6	6	5	4	13	20	33
	3	10	13	9	15	9	12	8	6	6	7	17	30	26	56
	0	8	14	11	19	4	14	4	10	12	8	8	32	24	56

TABLE 10 (Continued)

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
Number Involved		27	29	23	39	14	31	15	18	25	19	24	67	65	132
19	A	6	8	8	9	2	6	5	6	7	5	4	14	19	33
	B	6	5	2	10	1	6	2	5	4	3	4	12	12	24
	C	3	4	8	9	6	7	4	7	7	4	1	19	11	30
	D	10	18	11	16	6	14	5	10	13	9	10	32	29	61
	E	7	4	3	7	3	3	4	5	4	3	5	14	10	24
	F	7	11	6	13	2	9	4	9	6	6	5	18	21	39
	G	10	7	3	7	6	7	4	1	7	4	10	18	15	33
20	A	16	16	11	22	7	18	11	8	16	7	12	35	37	72
	B	7	10	10	17	4	10	7	6	9	7	9	26	22	48
	C	12	12	9	15	3	9	5	7	15	8	7	30	21	51
	D	7	9	3	13	6	8	4	7	7	5	7	23	15	38
	E	9	8	8	7	2	6	3	4	9	6	6	19	15	34
	F	7	5	6	13	6	9	6	5	6	4	7	19	18	37
	G	5	2	2	2	2	3	1	1	3	0	5	7	6	13
Number Involved		24	23	18	33	12	24	15	16	20	14	21	60	50	110
21 I-A	1	9	8	8	17	2	8	3	9	10	8	6	29	15	44
	2	1	3	1	2	4	3	4	0	1	1	2	5	6	11
	3	5	3	4	7	4	8	3	1	3	1	7	8	15.	23
	T	15	14	13	26	10	19	10	10	14	10	15	42	36	78
B	1	7	8	4	13	1	5	3	5	6	5	9	22	11	33
	2	3	1	1	1	5	2	1	1	3	2	2	7	4	11
	3	1	3	1	7	1	5	3	0	2	1	2	5	8	13
	T	11	12	6	21	7	10	7	6	11	8	13	34	23	57
C1	1	8	7	4	11	3	8	4	5	7	3	6	18	15	33
	2	2	3	1	4	4	3	2	2	3	3	1	8	6	14
	3	11	10	7	17	4	10	8	7	6	7	11	25	24	49
	T	21	20	12	32	11	21	14	14	16	13	18	51	45	96
2	1	9	4	3	11	0	4	2	3	9	5	4	17	10	27
	2	2	1	1	1	5	2	2	0	2	2	2	6	4	10
	3	4	3	1	5	0	3	2	1	2	0	5	6	7	13
	T	15	8	5	17	5	9	6	4	13	7	11	29	21	50
3	1	10	4	4	10	0	6	2	3	8	6	3	17	11	28
	2	2	2	1	1	5	2	1	1	3	2	2	6	5	11
	3	2	2	3	8	4	9	3	0	1	1	5	7	12	19
	T	14	8	8	19	9	17	6	4	12	9	10	30	28	58

TABLE 10 (Continued)

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
21 I-C4	1	7	11	5	8	1	5	3	5	7	5	7	20	12	32
	2	2	0	1	2	3	1	2	0	2	2	1	5	3	8
	3	9	3	4	13	4	10	4	1	6	2	10	16	17	33
	T	18	14	10	23	8	16	9	6	15	9	18	41	32	73
D	1	8	11	6	10	2	8	4	6	7	5	7	22	15	37
	2	4	0	1	1	4	2	1	0	3	3	1	6	4	10
	3	4	2	2	11	1	7	3	2	2	1	5	7	13	20
	T	16	13	9	22	7	17	8	8	12	9	13	35	32	67
E	1	11	13	2	12	2	7	3	6	10	4	10	27	13	40
	2	1	0	1	4	4	3	2	0	1	3	1	5	5	10
	3	4	1	4	6	2	7	3	1	3	2	1	6	11	17
	T	16	14	7	22	8	17	8	7	14	9	12	38	29	67
F	1	9	10	4	14	2	8	3	4	9	5	10	26	13	39
	2	2	1	2	2	6	4	2	0	3	2	2	7	6	13
	3	6	4	3	5	3	4	2	4	2	4	5	11	10	21
	T	17	15	9	21	11	16	7	8	14	11	17	44	29	73
G	1	8	5	4	7	1	4	1	4	8	4	4	17	8	25
	2	1	1	0	1	3	1	0	1	2	1	1	4	2	6
	3	2	1	1	4	1	4	1	1	1	0	2	4	5	9
	T	11	7	5	12	5	9	2	6	11	5	7	25	15	40
II-A	1	8	11	5	14	0	6	3	5	10	5	9	24	14	38
	2	1	0	0	1	4	0	2	0	1	2	1	4	2	6
	3	1	3	2	4	4	6	1	1	2	0	4	6	8	14
	T	10	14	7	19	8	12	6	6	13	7	14	34	24	58
B	1	8	6	4	8	3	9	0	4	7	3	6	19	10	29
	2	2	1	1	2	3	2	2	1	0	1	3	4	5	9
	3	0	0	0	6	1	2	2	0	0	2	1	3	4	7
	T	10	7	5	16	7	13	4	5	7	6	10	26	19	45
C	1	7	8	9	10	2	3	6	4	10	5	8	25	11	36
	2	3	0	2	3	4	2	4	0	2	3	1	7	5	12
	3	9	8	4	12	5	11	5	6	4	3	9	17	21	38
	T	19	16	15	25	11	16	15	10	16	11	18	49	37	86
D	1	8	5	4	6	2	5	1	4	7	4	4	16	9	25
	2	1	0	2	2	2	1	3	0	1	1	1	4	3	7
	3	0	2	3	7	0	4	3	2	1	1	1	6	6	12
	T	9	7	9	15	4	10	7	6	9	6	6	26	18	44
E	1	9	7	5	12	3	9	0	3	11	6	7	25	11	36
	2	2	2	2	1	3	3	3	0	0	2	2	3	7	10
	3	2	1	2	6	2	2	2	1	3	2	3	6	7	13
	T	13	10	9	19	8	14	5	4	14	10	12	34	25	59

TABLE 10 (Continued)

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
21 II-F	1	8	8	8	13	3	8	5	5	10	4	8	26	14	40
	2	0	1	1	2	4	1	2	1	1	2	1	5	3	8
	3	2	4	2	7	1	4	5	1	1	1	4	7	9	16
	T	10	13	11	22	8	13	12	7	12	7	13	38	26	64
III-A	1	6	3	1	8	2	5	2	3	4	2	4	12	8	20
	2	2	0	2	1	4	2	2	0	2	1	2	5	4	9
	3	6	6	3	9	4	10	2	2	3	3	8	13	15	28
		14	9	6	18	10	17	6	5	9	6	14	30	27	57
B	1	9	10	7	11	1	5	3	7	9	6	8	27	11	38
	2	1	1	2	4	4	3	3	1	2	1	2	6	6	12
	3	6	6	4	13	4	11	5	3	6	3	5	14	19	33
	T	16	17	13	28	9	19	11	11	17	10	15	47	36	83
C	1	8	6	8	13	3	7	2	7	9	6	7	25	13	38
	2	3	2	3	4	3	3	4	2	2	2	1	6	8	14
	3	3	4	3	10	3	8	4	2	4	2	3	12	11	23
	T	14	12	13	27	9	18	10	11	15	10	11	43	32	75
D	1	10	9	9	14	4	9	3	5	12	10	7	32	14	46
	2	1	2	2	2	3	3	4	1	1	0	1	3	7	10
	3	4	2	1	10	1	4	4	1	5	0	4	8	10	18
	T	15	13	12	25	8	16	10	7	18	10	12	42	31	73
E	1	8	5	7	10	4	6	3	5	11	5	4	22	12	34
	2	3	2	3	1	0	2	2	2	1	1	1	3	6	9
	3	4	6	0	10	3	7	5	1	3	2	5	10	13	23
	T	15	13	10	21	7	15	10	8	15	8	10	35	31	66
F	1	6	7	3	15	3	7	2	4	10	4	7	23	11	34
	2	2	5	2	3	4	3	5	2	2	2	2	7	9	16
	3	7	4	2	10	3	10	2	2	5	3	4	13	13	26
	T	15	16	7	28	10	20	9	8	17	9	13	43	33	76
G	1	6	6	6	14	5	8	3	6	9	7	4	24	13	37
	2	0	3	2	2	2	2	2	1	1	1	2	5	4	9
	3	9	6	6	10	2	9	6	3	7	3	5	16	17	33
	T	15	15	14	25	9	19	10	10	17	11	11	44	37	78
IV-A	1	12	13	6	9	1	5	5	5	9	8	9	24	17	41
	2	0	0	1	3	4	1	2	0	2	1	2	6	2	8
	3	6	3	4	13	5	13	2	2	4	3	7	14	17	31
	T	18	16	11	25	10	19	9	7	15	12	18	44	36	80

TABLE 10 (Continued)

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
21 IV-B	1	7	8	9	10	2	3	5	6	14	4	4	25	11	36
	2	1	1	2	2	2	2	2	0	0	2	2	4	4	8
	3	5	1	2	10	3	11	2	2	1	2	3	8	13	21
	T	13	10	13	22	7	16	9	8	15	8	9	37	28	65
C	1	8	6	3	8	3	4	2	4	9	5	4	17	11	28
	2	2	4	2	4	3	4	3	2	1	2	3	7	8	15
	3	12	12	10	16	4	13	7	9	9	6	10	28	26	54
	T	22	22	15	28	10	21	12	15	19	13	17	52	45	97
D	1	9	7	2	9	3	5	1	4	10	3	7	20	10	30
	2	1	1	2	2	3	2	2	0	2	1	2	6	3	9
	3	2	1	2	6	1	4	2	1	1	2	2	5	7	12
	T	12	9	6	17	7	11	5	5	13	6	11	31	20	57
E	1	6	6	6	11	3	5	2	4	11	5	5	22	10	32
	2	1	4	2	4	2	3	4	1	1	2	2	6	7	13
	3	8	5	1	7	2	5	4	4	4	2	4	12	11	23
	T	15	15	9	22	7	13	10	9	16	9	11	40	28	68
V-A	1	10	8	7	11	4	5	4	6	11	6	8	26	14	40
	2	1	1	2	2	3	3	3	1	0	1	2	5	5	10
	3	3	5	2	7	0	4	2	4	4	2	1	8	9	17
	T	14	14	11	21	7	12	9	11	15	9	11	39	28	67
B	1	7	5	3	9	3	6	3	4	5	5	4	14	13	27
	2	2	2	2	3	4	2	3	1	3	2	2	9	4	13
	3	9	9	5	13	3	9	4	5	7	5	9	22	17	39
	T	18	16	10	25	10	17	10	10	15	12	15	45	34	79
C	1	7	10	6	9	3	7	5	5	7	6	5	17	18	35
	2	3	1	2	4	5	3	4	1	3	2	2	9	6	15
	3	9	6	3	14	2	10	4	4	6	4	6	18	16	34
	T	19	17	11	27	10	20	13	10	16	12	13	44	40	84
D	1	9	9	6	10	2	6	5	3	11	5	6	23	13	36
	2	2	0	2	2	4	3	3	0	1	1	2	5	5	10
	3	0	2	4	6	1	4	2	3	1	1	2	6	7	13
	T	11	11	12	18	7	13	10	6	13	7	10	34	25	59
E	1	6	3	2	11	2	6	2	4	5	7	0	12	12	24
	2	1	0	1	0	3	1	0	0	2	1	1	4	1	5
	3	1	4	3	6	0	4	4	1	1	1	3	5	9	14
	T	8	7	6	17	5	11	6	5	8	9	4	21	22	43

TABLE 10 (Continued)

Question Number	Response	Northeast	Great Lakes	South	Midwest	West	1-999	1000-1499	1500-2499	2500-4999	5000-9999	10000 Up	Public	Private	Total
MINIMUM RESPONSES															
Number Involved		54	66	38	71	32	58	44	41	43	43	32	101	160	261
1	1	4	7	3	13	2	2	6	0	5	7	9	16	13	29
	2	12	28	19	17	10	22	14	15	12	15	8	31	55	86
	3	36	30	14	38	17	32	23	25	23	18	14	50	85	135
	0	2	1	2	3	3	2	1	1	3	3	1	4	7	11
2	1	3	5	1	9	0	3	2	1	4	6	2	11	7	18
	2	47	60	35	55	25	49	40	38	34	32	29	83	139	222
	0	4	1	2	7	7	6	2	2	5	5	1	7	14	21
TOTAL MINIMUM, PARTIAL, COMPLETE															
1	1	25	25	16	43	9	20	15	11	23	20	29	66	52	118
	2	18	38	30	32	19	35	21	22	20	22	17	56	81	137
	3	36	36	17	41	18	36	24	29	25	18	16	55	93	148
	0	2	1	2	3	3	2	1	1	3	3	1	4	7	11
2	1	22	23	13	37	10	24	13	11	24	14	19	58	47	105
	2	54	76	48	75	32	63	45	49	41	44	43	114	171	285
	0	5	1	4	7	7	6	3	3	6	5	1	9	15	24
Number Involved		81	100	65	119	49	93	61	63	71	63	63	181	233	414
Possible Respondents		184	184	147	147	101	167	145	125	128	125	120	358	452	810

APPENDIX E

TABLE 11. QUESTIONS #1 AND #2 RESPONSE-COMBINATIONS BY LOCATION, SIZE, AND TYPE OF INSTITUTION

	Response to Question #1												
	Yes			Somewhat			No			Blank			
	Response to Question #2												
	Yes	No	Blank	Yes	No	Blank	Yes	No	Blank	Yes	No	Blank	Total
Northeast	16	9	0	4	13	1	2	32	2	0	0	2	81
Great Lakes	13	12	0	8	30	0	2	34	0	0	0	1	100
South	8	7	1	3	27	0	2	14	1	0	0	2	65
Midwest	27	16	0	8	24	0	2	35	4	0	0	3	119
West	5	4	0	5	13	1	0	15	3	0	0	3	49
Total	69	48	1	28	107	2	8	130	10	0	0	11	414
0-999	14	6	0	6	28	1	4	29	3	0	0	2	93
1000-1499	9	6	0	4	17	0	0	22	2	0	0	1	61
1500-2499	7	3	1	4	18	0	0	28	1	0	0	1	63
2500-4999	18	5	0	3	16	1	3	20	2	0	0	3	71
5000-9999	9	11	0	5	17	0	0	16	2	0	0	3	63
10000 Up	12	17	0	6	11	0	1	15	0	0	0	1	63
Total	69	48	1	28	107	2	8	130	10	0	0	11	414
Public	40	25	1	16	39	1	2	50	3	0	0	4	181
Private	29	23	0	12	68	1	6	80	7	0	0	7	233
Total	69	48	1	28	107	2	8	130	10	0	0	11	414

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